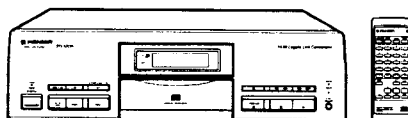


Service Manual

 **PIONEER®**
The Art of Entertainment



ORDER NO.
RRV1550

COMPACT DISC PLAYER PD-S705

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model	Power Requirement	The voltage can be converted by the following method.
	PD-S705		
HY	○	AC220-230V	AC230-240V, *
HV	○	AC230-240V	AC220-230V, *
HPW	○	AC230-240V	AC220-230V, *
SD	○	AC110V/120-127V/220V/240V	With the voltage selector

* : Alter the wiring of the Power-supply block at the primary winding of Power-transformer referring to the "Line Voltage Selection" described in Service Manual.



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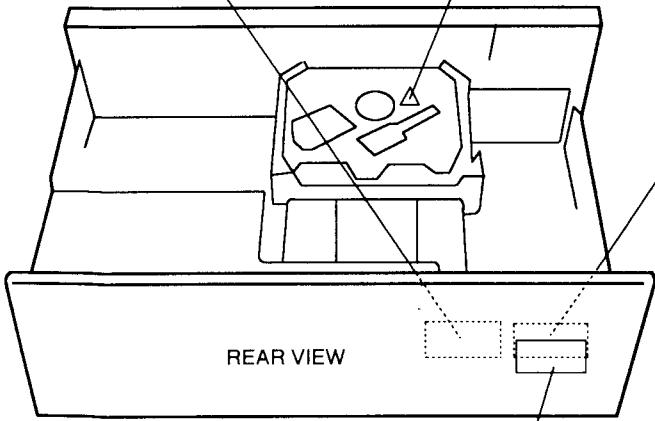
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1. SAFETY INFORMATION

<p>VARO! AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NAKYMATTOMALLE LASERSATEILYLLE. ALÄ KATSO SÄTEESEEN.</p>	 LASER Kuva 1 Lasersateilyn varoitusmerkki	<p>WARNING! DEVICE INCLUDES LASER DIODE WHICH EMITS INVISIBLE INFRARED RADIATION WHICH IS DANGEROUS TO EYES. THERE IS A WARNING SIGN ACCORDING TO PICTURE 1 INSIDE THE DEVICE CLOSE TO THE LASER DIODE.</p>	 LASER Picture 1 Warning sign for laser radiation
<p>ADVERSEL: USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UDGÅ UDSÆTTELSE FOR STRÅLING.</p>		<p>IMPORTANT THIS PIONEER APPARATUS CONTAINS LASER OF CLASS 1. SERVICING OPERATION OF THE APPARATUS SHOULD BE DONE BY A SPECIALLY INSTRUCTED PERSON.</p>	
<p>VARNING! OSYNLIG LASERSTRÅLNING NÅR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRÄKTA EJ STRÅLEN.</p>		<p>LASER DIODE CHARACTERISTICS MAXIMUM OUTPUT POWER: 5 mw WAVELENGTH: 780-785 nm</p>	

LABEL CHECK

HY type	HY, HV and HPW types	HY type	HV and HPW types
<p>VARO! Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen. VARNING! Osynlig laserstrålning när denna del är öppnad och spärren är urkopplad. Beträkta ej strålen. VRW1797 A</p>	 VRW 328	<p>ADVARSEL USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UDGÅ UDSÆTTELSE FOR STRÅLING. VORSICHT! UNSICHTBARE LASERSTRÅHLUNG TRITZ AUS, WENN DECKEL (ODER KLAPPE) GEÖFFNET IST! NICHT DEM STRAHL AUSSETZEN! VRW1094</p>	<p>CAUTION INVISIBLE LASER RADIATION WHEN OPEN, AVOID EXPOSURE TO BEAM PRW1018</p>
 REAR VIEW			
<div style="border: 2px solid black; padding: 5px; display: inline-block;"> CLASS 1 LASER PRODUCT <small>VRW-328</small> </div> HY, HV and HPW types			

Additional Laser Caution

- Laser Interlock Mechanism**
The position of the switch (S601) for detecting loading state is detected by the system microprocessor, and the design prevents laser diode oscillation when the switch (S601) is not on CLMP terminal side (CLMP signal is OFF or high level.). Thus, the interlock will no longer function if the switch (S601) is deliberately set to CLMP terminal side (low level).
The interlock also does not function in the test mode * . Laser diode oscillation will continue, if pin 1 of M51953FP (IC101) on the PRE AMP BOARD ASSY mounted on the pickup assy is connected to GND, or pin 19 is connected to low level (ON), or else the terminals of Q101 are shorted to each other (fault condition).
- When the cover is opened with the servo mechanism block removed and turned over, close viewing of the objective lens with the naked eye will cause exposure to a Class 1 laser beam.

* Refer to page 26.

2. PACKING, EXPLODED VIEWS AND PARTS LIST

NOTES:

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "☉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

2.1 PACKING

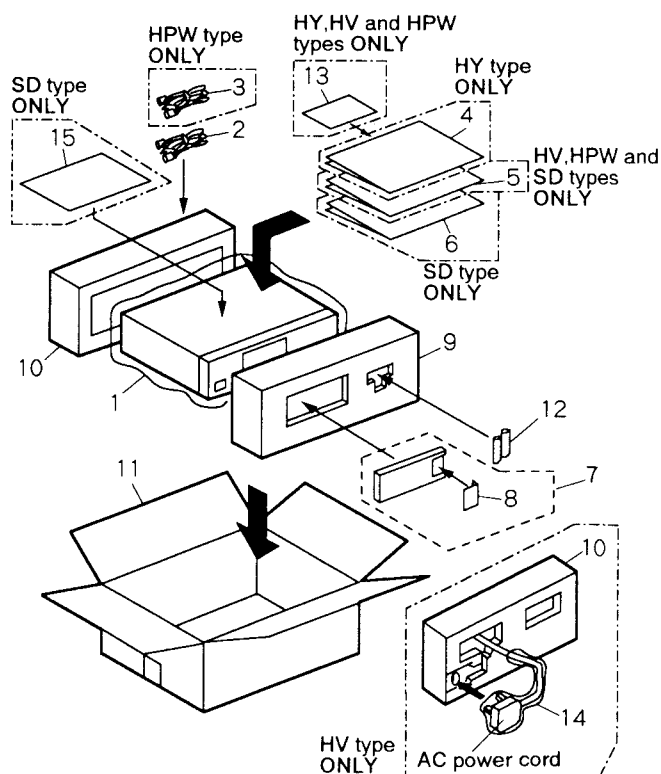
(1) CONTRAST OF HY, HV, HPW AND SD TYPES

HY, HV, HPW and SD types have the same construction except for the following :

Mark	No.	Symbol & Description	Part No.				Remarks
			HY type	HV type	HPW type	SD type	
NSP	3	Control Cable	Not used	Not used	PDE1247	Not used	
	4	Operating Instructions (English/French/German/Italian/ Dutch/Swedish/Spanish/Portuguese)	PRE1243	Not used	Not used	Not used	
	5	Operating Instructions (English)	Not used	PRB1240	PRB1240	PRB1240	
	6	Operating Instructions (Spanish/Chinese)	Not used	Not used	Not used	PRD1010	
	10	Protector R	PHA1245	PHA1253	PHA1245	PHA1245	
	11	CD Packing Case	PHG2170	PHG2193	PHG2175	PHG2175	
NSP	13	Warranty Card	ARY7008	ARY7008	PRY1002	Not used	
	14	Polyethylene Bag (115 × 270 × 0.05)	Not used	Z21 - 013	Not used	Not used	
	15	Caution Card 220V	Not used	Not used	Not used	ARR7003	

(2) PARTS LIST FOR HY TYPE

Mark	No.	Description	Part No.
	1	Mirror Mat Sheet (750 × 600 × 0.5)	Z23 - 007
	2	Output Cable	PDE1248
	3	
	4	Operating Instructions (English/French/German/Italian/ Dutch/Swedish/Spanish/Portuguese)	PRE1243
	5	
	6	
	7	Remote Control Unit (CU - PD081)	PWW1111
	8	Battery Cover	PZN1012
	9	Protector F	PHA1243
	10	Protector R	PHA1245
NSP	11	CD Packing Case	PHG2170
	12	Dry Cell Batteries (R03, AAA)	VEM - 022
NSP	13	Warranty Card	ARY7008
	14	
	15	



2.2 EXTERIOR SECTION

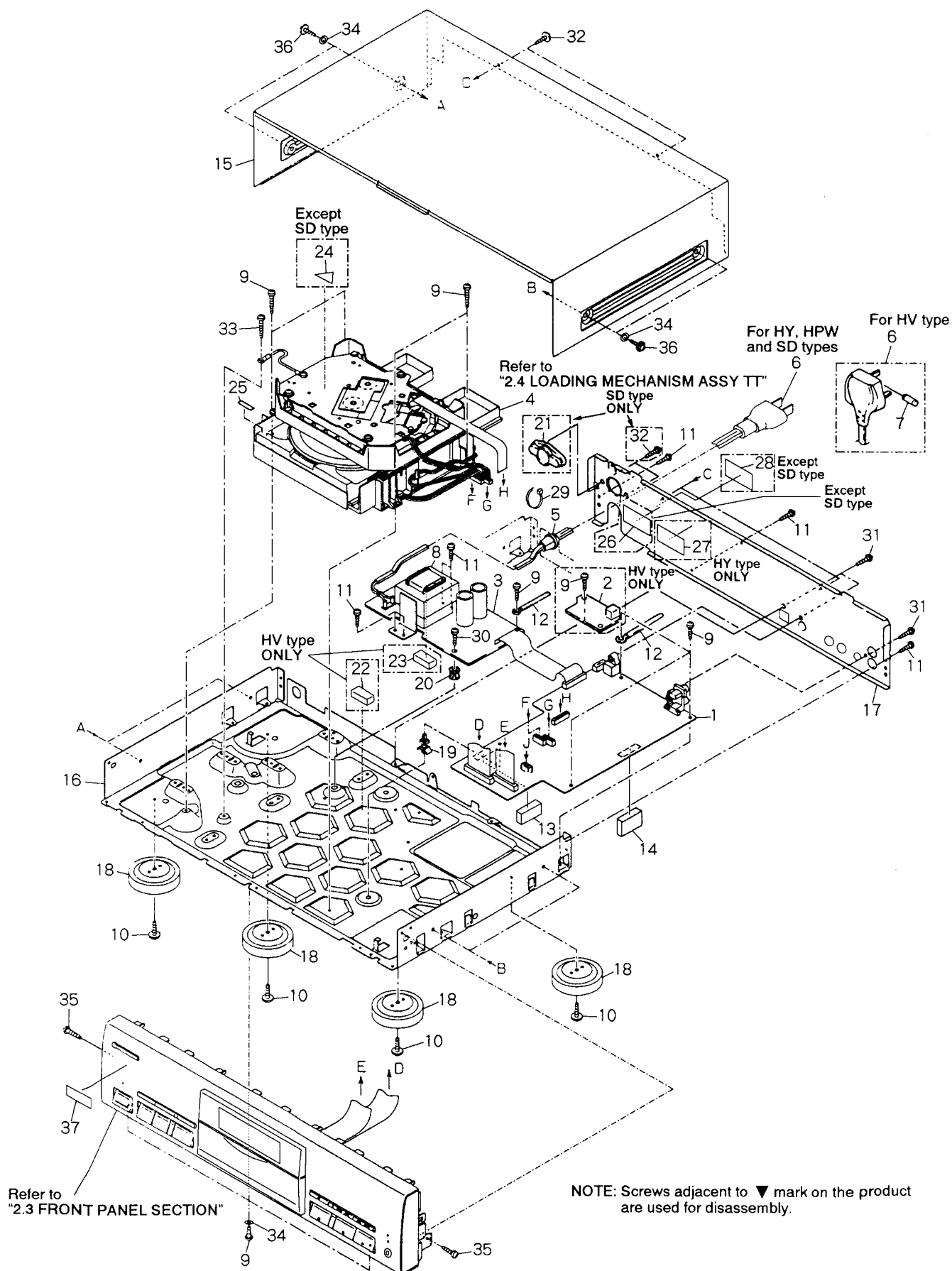
(1) CONTRAST OF HY, HV, HPW AND SD TYPES

HY, HV, HPW and SD types have the same construction except for the following :

Mark	No.	Symbol & Description	Part No.				Remarks
			HY type	HV type	HPW type	SD type	
△	1	MAIN BOARD ASSY	PWZ3233	PWZ3234	PWZ3235	PWZ3236	
NSP	2	DIGITAL OUT ASSY	Not used	PWZ3255	Not used	Not used	
NSP	3	SERVO TRANS ASSY	PWZ3275	PWZ3276	PWZ3278	PWZ3277	
△	6	AC Power Cord	PDG1003	PDG1055	ADG1123	PDG1013	
△	7	Fuse (5A)	Not used	PEK1003	Not used	Not used	
△	8	Power Transformer (AC220-230V/230-240V)	PTT1301	PTT1301	PTT1301	Not used	
△	8	Power Transformer (AC110V/120-127V/220V/240V)	Not used	Not used	Not used	PTT1302	
	17	Rear Base	PNA2263	PNA2264	PNA2266	PNA2265	
△	21	Voltage Selector	Not used	Not used	Not used	PSB1002	
NSP	22	Rubber Spacer	Not used	PEB1195	Not used	Not used	
NSP	23	Spacer B	Not used	PEB1229	Not used	Not used	
	24	Caution Label (G)	VRW-329	VRW-329	VRW-329	Not used	
	26	Caution Label	VRW1094	PRW1018	PRW1018	Not used	
NSP	27	Caution Label HE	VRW1297	Not used	Not used	Not used	
NSP	28	Caution Label (F)	VRW-328	VRW-328	VRW-328	Not used	

(2) PARTS LIST FOR HY TYPE

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
△	1	MAIN BOARD ASSY	PWZ3233	NSP	20	PCB Spacer	PNY-404
	2	• • • • •			21	• • • • •	
NSP	3	SERVO TRANS ASSY	PWZ3275		22	• • • • •	
NSP	4	Loading Mechanism Assy TT	PXA1582		23	• • • • •	
△	5	Cord Stopper	CM-22B		24	Caution Label (G)	VRW-329
△	6	AC Power Cord	PDG1003		25	Caution Label	PRW1244
	7	• • • • •			26	Caution Label	VRW1094
△	8	Power Transformer (AC220-230V/230-240V)	PTT1301	NSP	27	Caution Label HE	VRW1297
	9	Screw	ABA1011	NSP	28	Caution Label (F)	VRW-328
					29	Binder	Z09-056
	10	Screw	ABA1050		30	Screw	IBZ30P150FCC
	11	Screw	ABA1207		31	Screw	BBZ30P080FCC
NSP	12	Cord Stopper	DNF1128		32	Screw	BBT30P080FCC
NSP	13	Cushion (3.5)	PEB1110		33	Screw	PDZ30P050FCC
NSP	14	Spacer A	PEB1228		34	Washer	WG40FCU
	15	Bonnet	PYY1175		35	Screw	IBZ30P060FCC
NSP	16	Under Base 7	PNA2155		36	Screw	FBT40P080FZK
	17	Rear Base	PNA2263		37	Getter	PRW1455
	18	Insulator	PNW1912				
NSP	19	PCB Holder	PNW2100				



2.3 FRONT PANEL SECTION

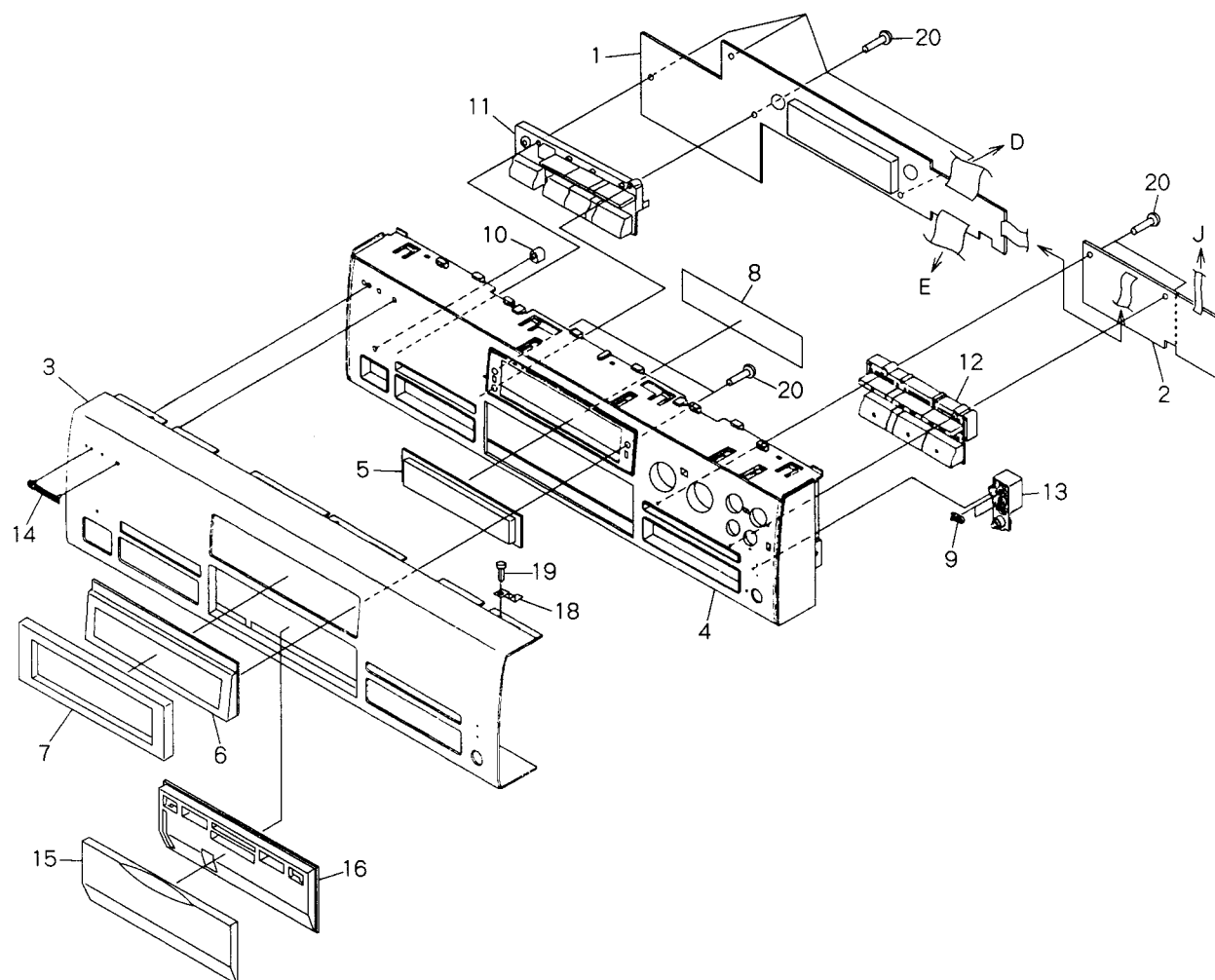
(1) CONTRAST OF HY, HV, HPW AND SD TYPES

HY, HV, HPW and SD types have the same construction except for the following :

Mark	No.	Symbol & Description	Part No.				Remarks
			HY type	HV type	HPW type	SD type	
	8	FL Sheet White 9	PAM1682	PAM1682	Not used	Not used	
	8	FL Sheet Orange 9	Not used	Not used	PAM1683	PAM1683	

(2) PARTS LIST FOR HY TYPE

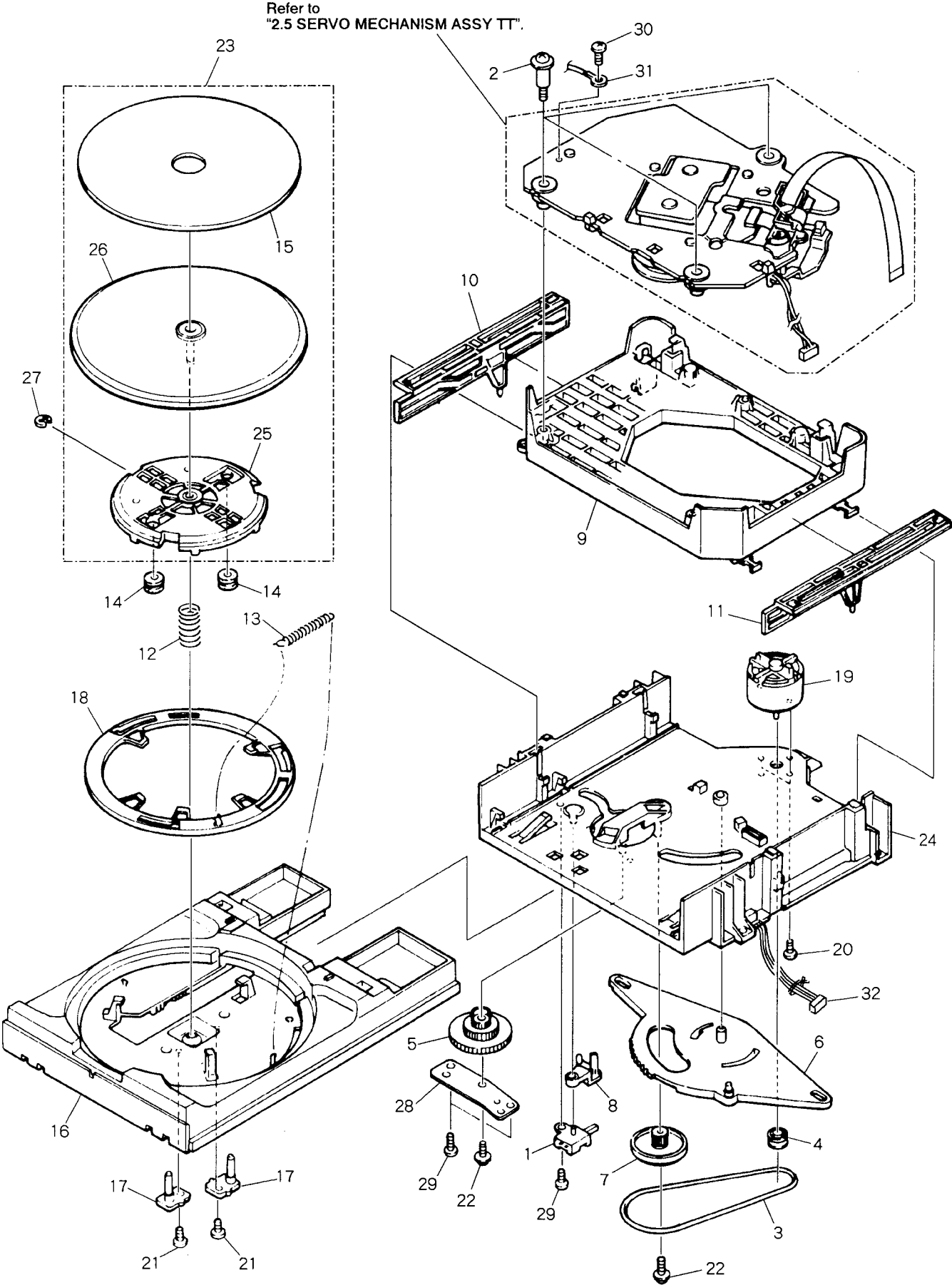
Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
NSP	1	DISPLAY ASSY	PWZ3265	11	Power Button 7	PAC1823	
NSP	2	SWITCH ASSY	PWZ3269	12	Operation Button 78	PAC1744	
	3	Front Panel 7	PAN1388	13	Output Button	PAC1661	
	4	Control Panel 9	PNW2586	14	Name Plate	VAM1032	
	5	Display Window	PAM1668	15	Tray Panel 7	PNW2661	
	6	Display Panel Holder	PNW2591	16	Tray Holder	PNW2592	
	7	Display Panel 7	PNW2662	17	• • • • •		
	8	FL Sheet White 9	PAM1682	18	Earth Plate	PBK1090	
	9	Indicator Lens	PEA1206	19	Nylone Rivet (3 × 4.5)	RBM-003	
	10	LED Lens	PNW2019	20	Screw	PPZ30P150FMC	



2.4 LOADING MECHANISM ASSY TT

Parts List

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	Lever Switch (S601)	DSK1003		20	Screw	BMZ26P040FMC
	2	Float Screw	PBA1027		21	Screw	IPZ26P060FCU
	3	Rubber Belt	PEB1186		22	Screw	IPZ20P080FMC
	4	Motor Pulley	PNW1634		23	Turn Table Assy	PEA1165
	5	Drive Gear	PNW1996		24	Loading Base	PNW1995
	6	Synchronized Lever	PNW2168	NSP	25	Table Shaft Holder	PXA1383
	7	Gear Pulley	PNW1998	NSP	26	Turn Table	PNR1035
	8	SW Head	PNW1999		27	Stop Ring	YE20S
	9	Float Base	PNW2000		28	Shaft Holder	PNB1382
	10	Left Cam	PNW2001		29	Screw	BPZ26P060FMC
	11	Right Cam	PNW2002		30	Screw	BBZ26P060FMC
	12	Float Spring	PBH1120	NSP	31	Earth Lead	DE010VF0
	13	Lock Spring	PBH1121		32	Connector Asay 5P	PDE1243
	14	Float Rubber	PEB1014				
	15	Table Rubber Sheet	PEB1181				
	16	Tray	PNW2003				
	17	Table Guide	PNW2004				
	18	Lock Plate	PNW2005				
	19	D.C. Motor (0.75W, LOADING)	PXM1010				



2.5 SERVO MECHANISM ASSY TT

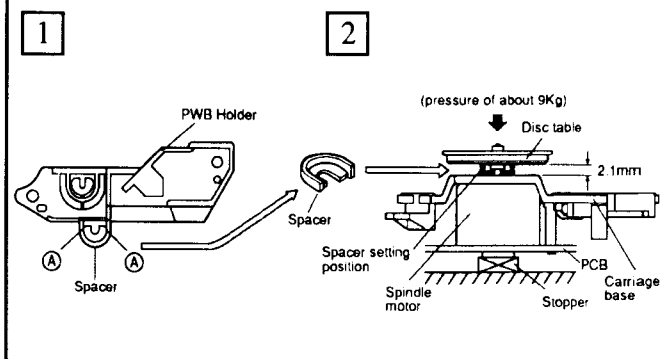
Parts List

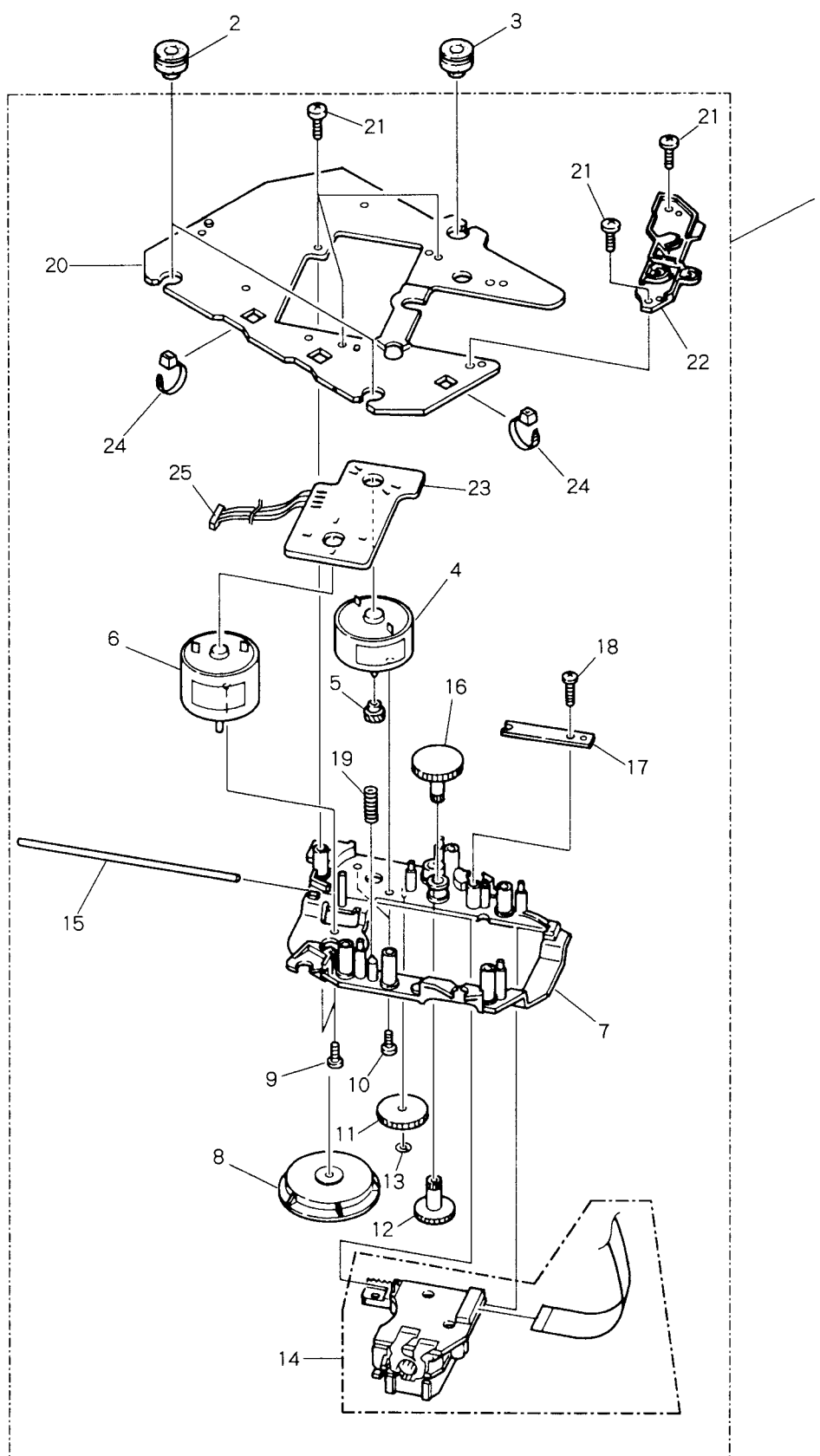
Mark	No.	Description	Part No.
NSP	1	Servo Mechanism Assy TT	PXA1583
	2	Float Rubber	PEB1031
	3	Float Rubber	PEB1170
	4	Carriage D.C. Motor (0.3W)	PXM1027
	5	Pinion Gear	PNW2055
	6	D.C. Motor Assy (SPINDLE, with Oil)	PEA1236
	7	Carriage Base	PNW2445
	8	Disc Table	PNW1067
	9	Screw	JFZ20P030FNI
	10	Screw	JFZ17P025FZK
	11	Gear 3	PNW2054
	12	Gear 2	PNW2053
	13	Washer	WT12D032D025
	14	Pickup Assy	PEA1291

Mark	No.	Description	Part No.
NSP	15	Guide Bar	PLA1094
	16	Gear 1	PNW2052
	17	Gear Stopper	PNB1303
	18	Screw	BPZ20P060FMC
	19	Earth Spring	PBH1132
	20	Mechanism Base TT	PNB1431
	21	Screw	BPZ26P100FMC
	22	PWB Holder	PNW2057
	23	Mechanism Board Assy	PWX1192
	24	Binder	PEC - 107
	25	Connector Assy 4P	PDE1238

• How to install the disc table

- 1 Use nippers or other tool to cut the two sections marked (A) in figure 1. Then remove the spacer.
- 2 While supporting the spindle motor shaft with the stopper, put the spacer on top of the carriage base and stick the disc table on top (takes about 9Kg pressure).
Take off the spacer.





3. SCHEMATIC AND PCB CONNECTION DIAGRAMS

NOTE FOR SCHEMATIC DIAGRAM (Type 4A)

1. When ordering service parts, be sure to refer to "PARTS LIST of EXPLODED VIEWS" or "PCB PARTS LIST".
2. Since these are basic circuits, some parts of them or the values of some components may be changed for improvement.
3. RESISTORS:
Unit: k:kΩ, M:MΩ, or Ω unless otherwise noted.
Rated power: 1/4W, 1/6W, 1/8W, 1/10W unless otherwise noted.
Tolerance:(F): ± 1%, (G): ± 2%, (K): ± 10%, (M): ± 20% or ± 5% unless otherwise noted.
4. CAPACITORS:
Unit : p:pF or μ:F unless otherwise noted.
Ratings : capacitor (μF) / voltage (V) unless otherwise noted.
Rated voltage : 50V except for electrolytic capacitors.
5. COILS:
Unit : m:mH or μ:H unless otherwise noted.
6. VOLTAGE AND CURRENT:
□ or ←V :
DC voltage (V) in PLAY mode unless otherwise noted.
↺mA or ←mA :
DC current in PLAY mode unless otherwise noted.
Value in () is DC current in STOP mode.
7. OTHERS:
●○ or ● : Adjusting point.
●◀ : Measurement point.
● The Δ mark found on some component parts indicates the importance of the safety factor of the parts. Therefore, when replacing, be sure to use parts of identical designation.
8. SCH - □ ON THE SCHEMATIC DIAGRAM:
● SCH-□ indicates the drawing number of the schematic diagram.
(SCH stands for schematic diagram.)

9. SWITCHES (Underline indicates switch position):

OUT OF PCB ASSY
S601 : CLAMP

MECHANISM BOARD ASSY
S610 : INSIDE

DISPLAY ASSY
S701 : TIME
S702 : REPEAT
S703 : RANDOM
S704 : POWER STANDBY/ON
S705 : DISPLAY OFF
S706 : EDIT
S707 : HI- LITE SCAN

SWITCH ASSY
S751 : OUTPUT SELECTOR
S752 : ▶
S753 : II
S754 : ▲ OPEN/CLOSE
S755 : ▶▶ ▶▶
S756 : ◀◀ ◀◀
S757 : ■

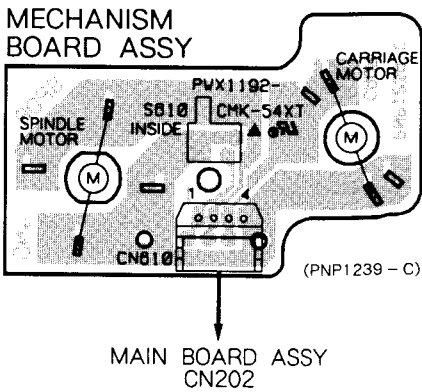
NOTE FOR PCB DIAGRAMS:

1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol in PCB Diagrams	Symbol in Schematic Diagrams	Part Name
		Transistor
		Transistor with resistor
		Field effect transistor
		Resistor array
		3-terminal regulator

● MECHANISM BOARD ASSY PCB DIAGRAM

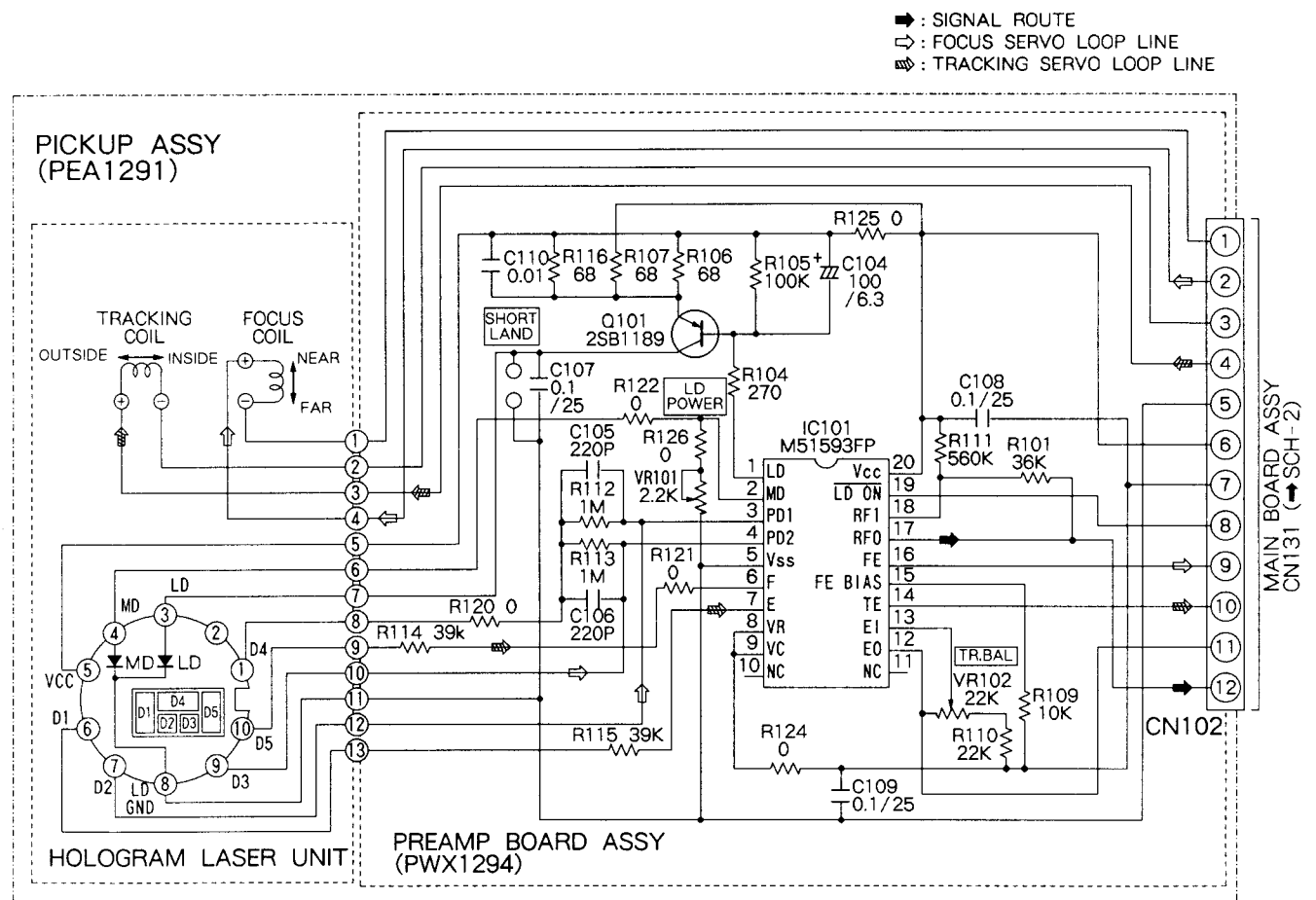
PCB - 1



● This diagram is viewed from the mounted parts side.

3.1 PICKUP ASSY

SCH - 1

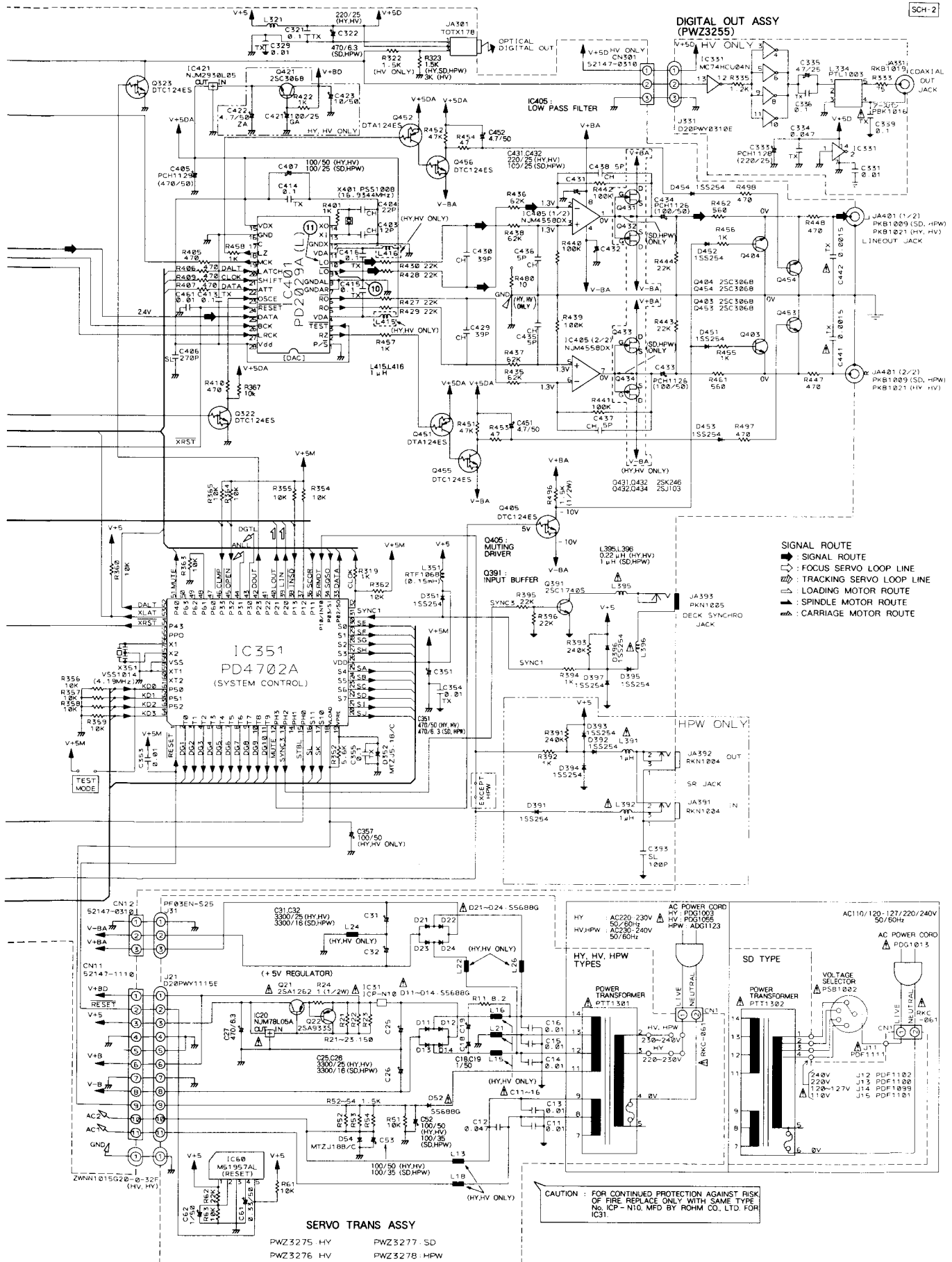


PICKUP ASSY

SCH-1

SCH-2



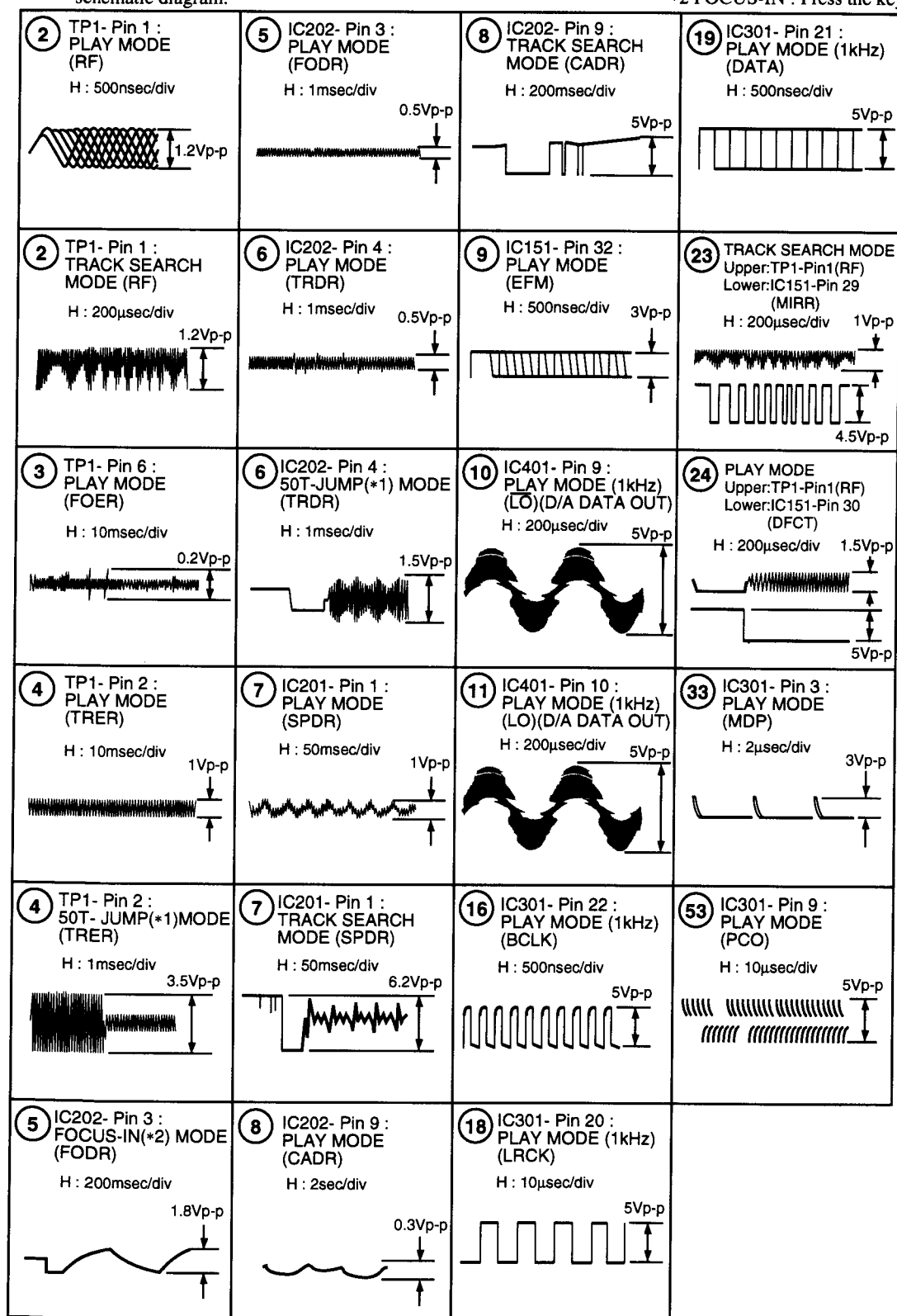


WAVEFORMS

Note : The encircled numbers denote measuring points in the schematic diagram.

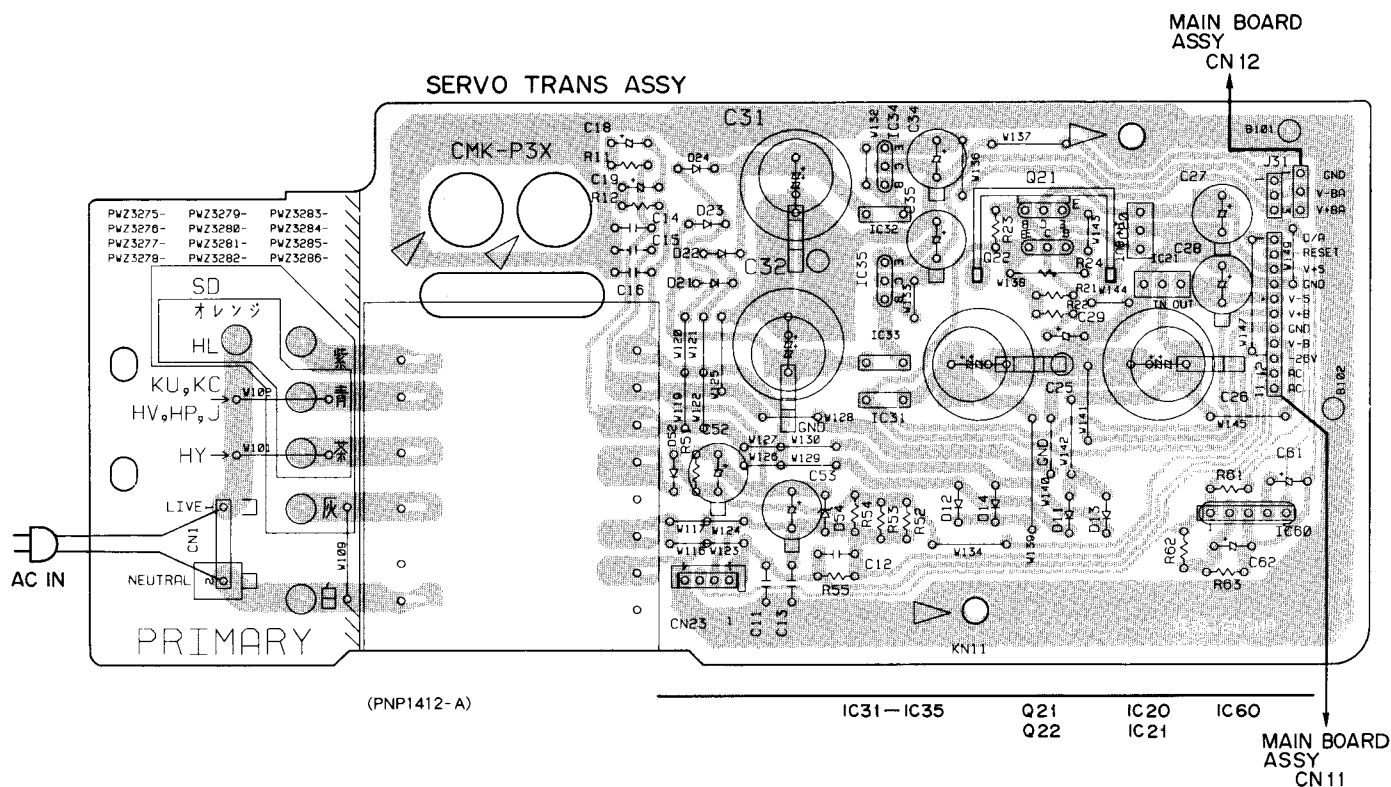
*1 50T-JUMP : After switching to the pause mode, press the manual search key.

*2 FOCUS-IN : Press the key without loading a disc.



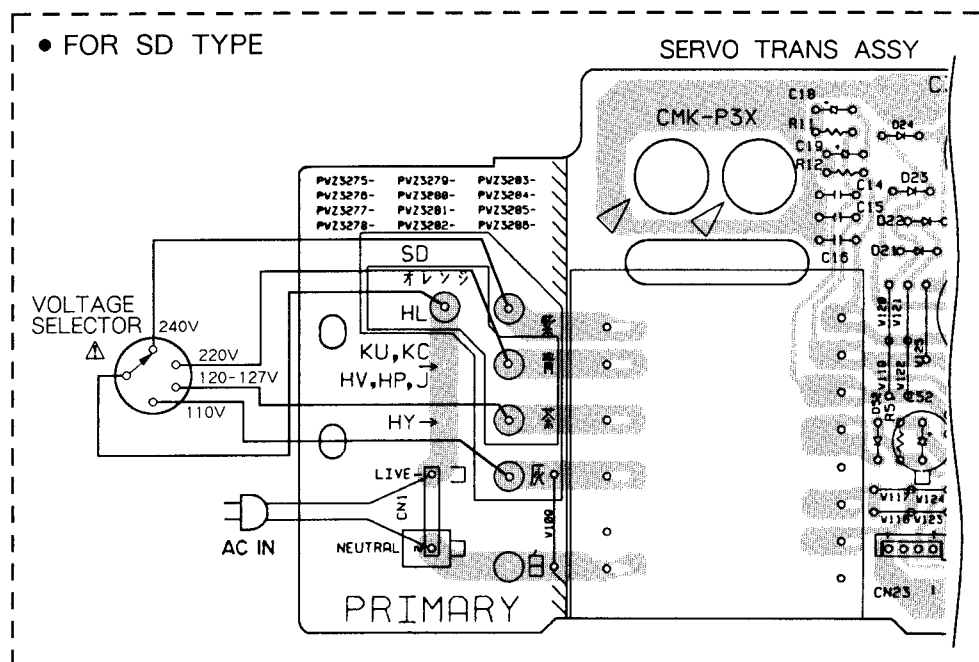
● SERVO TRANS ASSY PCB DIAGRAM

PCB - 2

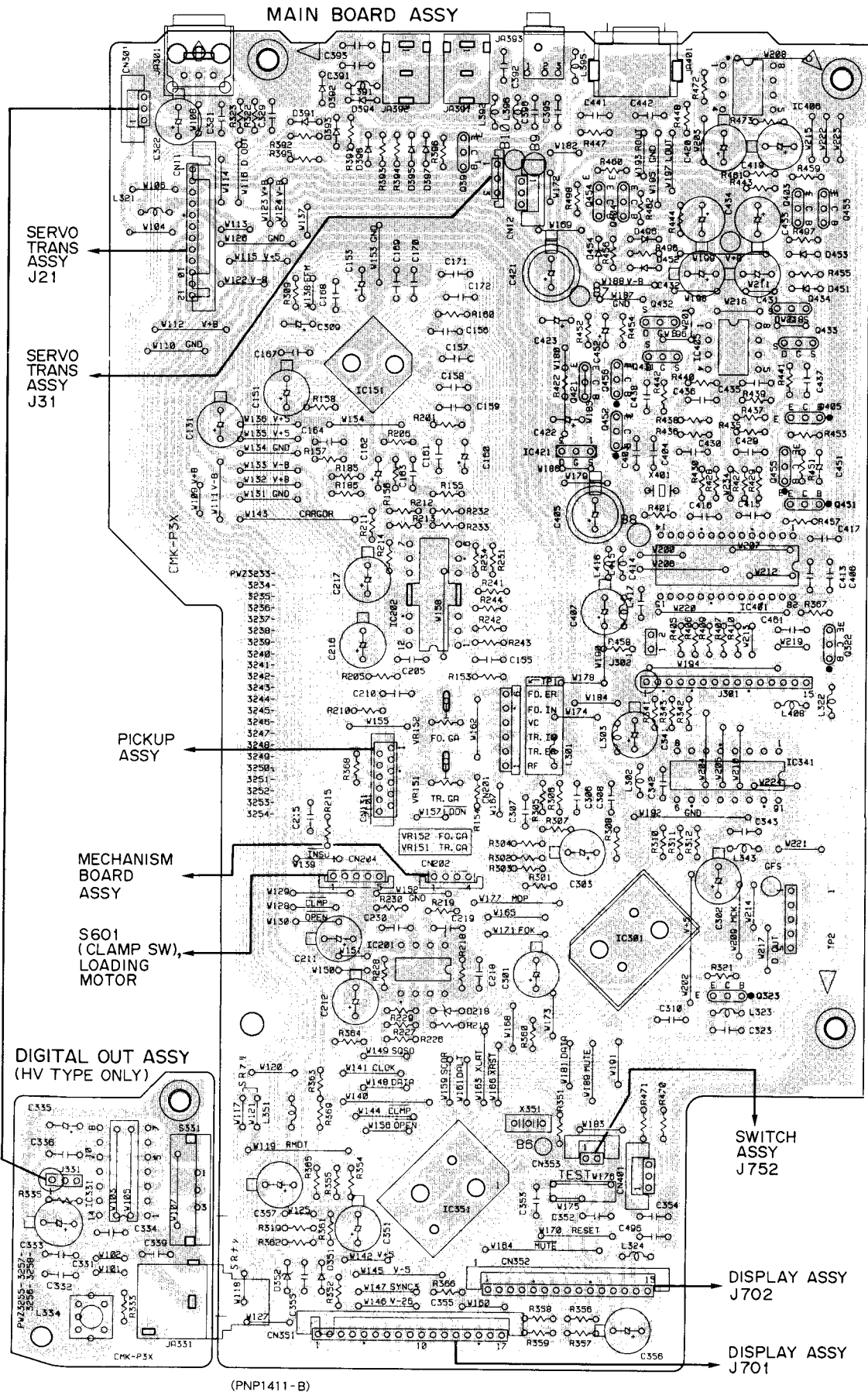


● This diagram is viewed from the mounted parts side.

● The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.



• MAIN BOARD AND DIGITAL OUT ASSEMBLIES PCB DIAGRAM



PCB - 3

Q391
Q454
Q404 Q403
Q453

Q434
Q432
Q433
Q431
Q421 Q456

Q405
Q452
IC421 Q455

Q451

IC401

Q322

VR152

VR151

IC341

IC301

IC201

Q323

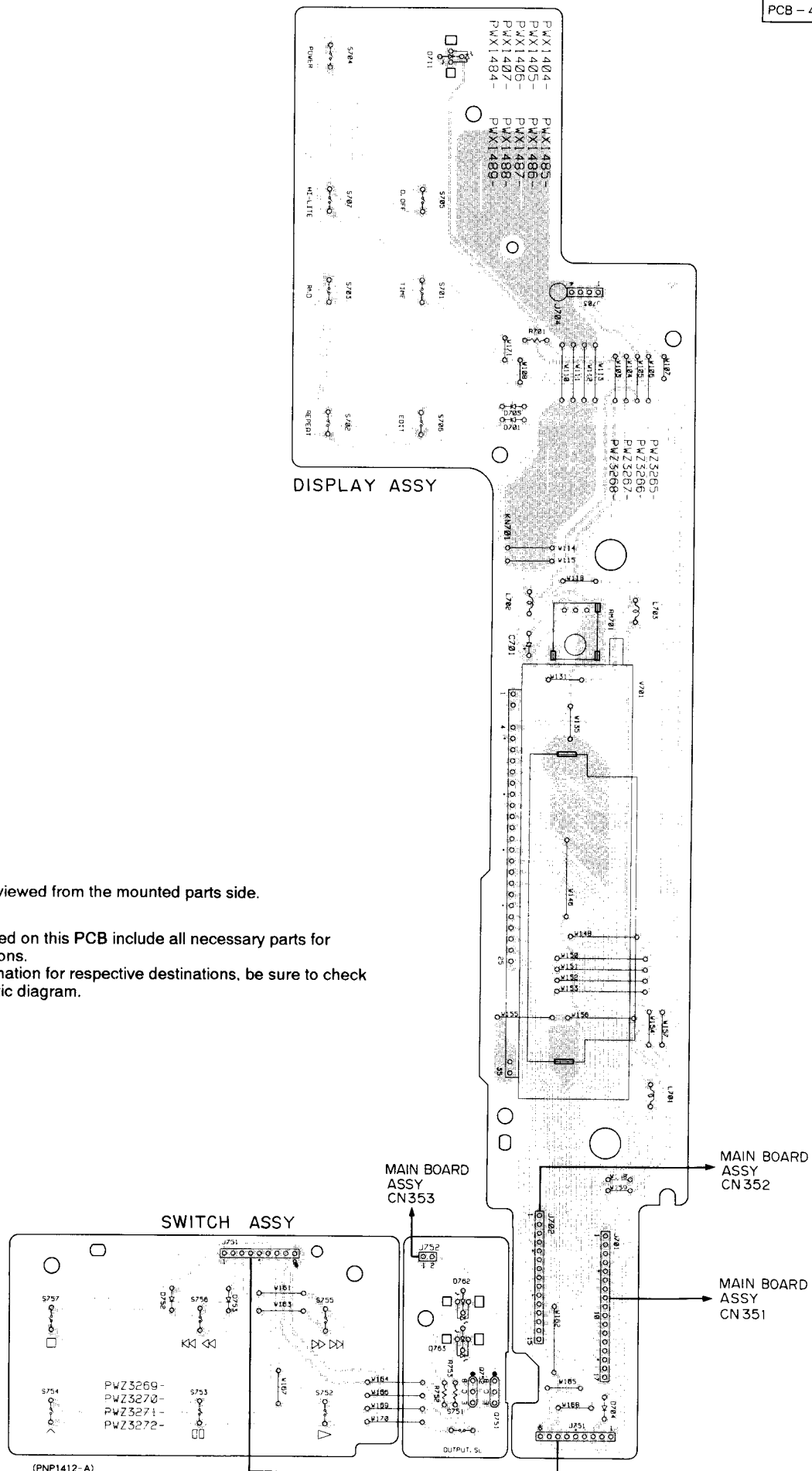
IC331 IC351

• This diagram is viewed from the mounted parts side.

• The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.

● DISPLAY AND SWITCH ASSEMBLIES
PCB DIAGRAM

PCB - 4



- This diagram is viewed from the mounted parts side.
- The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.

4. PCB PARTS LIST

NOTES:

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "◎" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- When ordering resistors, first convert resistance values into code form as shown in the following examples.
 Ex.1 When there are 2 effective digits(any digit apart from 0), such as 560 ohm and 47k ohm(tolerance is shown by J=5%, and K=10%).
 $560\ \Omega \rightarrow 56 \times 10^1 \rightarrow 561 \dots\dots\dots RD1/4PU \begin{matrix} 5 & 6 & 1 \\ \hline \end{matrix} J$
 $47k\ \Omega \rightarrow 47 \times 10^3 \rightarrow 473 \dots\dots\dots RD1/4PU \begin{matrix} 4 & 7 & 3 \\ \hline \end{matrix} J$
 $0.5\ \Omega \rightarrow 0R5 \dots\dots\dots RN2H \begin{matrix} 0 & R & 5 \\ \hline \end{matrix} K$
 $1\ \Omega \rightarrow 1R0 \dots\dots\dots RS1P \begin{matrix} 1 & R & 0 \\ \hline \end{matrix} K$
 Ex.2 When there are 3 effective digits(such as in high precision metal film resistors).
 $5.62k\ \Omega \rightarrow 562 \times 10^1 \rightarrow 5621 \dots\dots\dots RN1/4PC \begin{matrix} 5 & 6 & 2 & 1 \\ \hline \end{matrix} F$

4.1 LIST OF WHOLE PCB ASSEMBLIES

Mark	Symbol & Description	Part No.				Remarks
		HY type	HV type	HPW type	SD type	
NSP Δ NSP	MOTHER BOARD ASSY └ MAIN BOARD ASSY └ DIGITAL OUT ASSY	PWM2030 PWZ3233 Not used	PWM2031 PWZ3234 PWZ3255	PWM2032 PWZ3235 Not used	PWM2033 PWZ3236 Not used	
NSP NSP NSP NSP	SUB BOARD ASSY └ DISPLAY ASSY └ SWITCH ASSY └ SERVO TRANS ASSY	PWX1404 PWZ3265 PWZ3269 PWZ3275 *	PWX1407 PWZ3265 PWZ3269 PWZ3276 *	PWX1406 PWZ3265 PWZ3269 PWZ3278	PWX1405 PWZ3265 PWZ3269 PWZ3277	
	MECHANISM BOARD ASSY	PWX1192	PWX1192	PWX1192	PWX1192	

Note * : Although PWZ3275 and PWZ3276 are different in part number, they consist of the same components.

4.2 FOR HY AND HV TYPES

Mark No. Description Part No.

MOTHER BOARD ASSY

OTHERS

PC Board MOTHER BOARD PNP1411

MAIN BOARD ASSY

● Contrast of PWZ3233 and PWZ3234

PWZ3233 and PWZ3234 have the same construction except for the following.

Mark	Symbol & Description	Part No.		Remarks
		PWZ3233	PWZ3234	
	R321 R322 R323 CN301 3P Jumper Connector	RD1/4PU102J Not used RD1/4PU152J Not used	RD1/4PU471J RD1/4PU152J RD1/4PU302J 52147 - 0310	

Mark No. Description Part No.

● PARTS LIST FOR PWZ3233

SEMICONDUCTORS

IC151	CXA1372Q
IC301	CXD2507AQ
Δ IC201	LA6517
Δ IC202	LA6520
Δ IC421	NJM2930L05
IC405	NJM4558DX
IC341	PD0236AD
IC401	PD2029A(L)
IC351	PD4702A
Q391	2SC1740S
Q403, Q404, Q421, Q453, Q454	2SC3068
Q432, Q434	2SJ103
Q431, Q433	2SK246
Q451, Q452	DTA124ES
Q322, Q323, Q405, Q455, Q456	DTC124ES
D351, D395-D397, D451-D454	1SS254
D352	MTZJ5. 1B
D218	MTZJ6. 8B

Mark	No.	Description	Part No.
COILS			
	L302, L303, L415, L416		LAU010J
	L301		LAU390J
△	L395, L396		LAUR22J
	L321, L351 (0.15mH)		RTF1068
CAPACITORS			
	C435-C438		CCCCH050C50
	C403		CCCCH120J50
	C404		CCCCH220J50
	C429, C430		CCCCH390J50
	C406		CCCSL271J50
	C153		CEAS101M10
	C309		CEASR47M50
	C421		CEGA101M25
	C423		CEZA100M50
	C422		CEZA4R7M50
	C205, C210, C215, C219, C329		CFTXA103J50
	C354		CFTXA103J50
	C158, C161, C321, C355		CFTXA104J50
	C413-C416		CFTXA104J50
△	C441, C442		CFTXA152J50
	C218		CFTXA272J50
	C157, C164, C169, C308		CGCYX103K25
	C159, C163		CGCYX104K25
	C156, C168		CGCYX333K25
	C307		CGCYX473K25
	C171		CKCYB102K50
	C306		CKCYB152K50
	C170		CKCYB332K50
	C172		CKCYB472K50
	C155		CKCYB561K50
	C167, C352, C353, C461		CKCYF103Z50
	C342		CQMA154J50
	C301, C341, C357, C407 (100 μ F/50V)		PCH1126
	C433, C434 (100 μ F/50V)		PCH1126
	C160, C162, C451, C452 (4.7 μ F/50V)		PCH1127
	C131, C151, C211, C212 (220 μ F/25V)		PCH1128
	C216, C217, C302, C303, C322 (220 μ F/25V)		PCH1128
	C431, C432 (220 μ F/25V)		PCH1128
	C351, C405 (470 μ F/50V)		PCH1129
RESISTORS			
	R496		RD1/2PM152J
	R480		RD1/4PM100J
	VR151, VR152 (22k Ω)		RCP1046
	Other Resistors		RD1/4PU□□□J
OTHERS			
	CN131 FPC CONNECTOR 12P		12FMZ-ABT
	CN202 MT CONNECTOR 4P		173981-4
	CN204 MT CONNECTOR 5P		173981-5
	CN353 2P JUMPER CONNECTOR		52147-0210
	CN11 11P JUMPER CONNECTOR		52147-1110
	CN352 15P JUMPER CONNECTOR		52147-1510
	CN351 17P JUMPER CONNECTOR		52147-1710
	CN12 3P TOP POST		B3B-EH
	JA401 2P AUDIO PIN JACK		PKB1021
	JA393 MINI JACK		PKN1005

Mark	No.	Description	Part No.
	X401	CRYSTAL RESONATOR(16.9344MHz)	PSS1008
	CN201	CONNECTOR 6P	RKP-533
	JA301	OPTICAL OUTPUT JACK	TOTX178
		PCB BINDER	VEF1008
	X351	CERAMIC RESONATOR(4.19MHz)	VSS1014

DIGITAL OUT ASSY (HV TYPE ONLY)**SEMICONDUCTORS**

IC331	MC74HCU04N
-------	------------

COIL

L334	PTL1003
------	---------

CAPACITORS

C335	CEAS470M25
C336, C339	CFTXA104J50
C334	CFTXA473J50
C331	CKCYF103Z50
C333 (220 μ F/25V)	PCH1128

RESISTORS

All Resistors	RD1/4PU□□□J
---------------	-------------

OTHERS

JA331 1P PIN JACK	RKB1019
-------------------	---------

SUB BOARD ASSY**OTHERS**

PC Board SUB BOARD	PNP1412
SCREW	BBZ30P080FCC
BINDER	ZCA-SKB90BK

DISPLAY ASSY**SEMICONDUCTORS**

D701, D704, D705	1SS254
D711	PCX1019

COILS

L701, L702	LFA010K
L703 (0.15mH)	RTF1068

SWITCHES

S701-S707	PSG1006
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CAPACITOR

C701	CEJA330M16
------	------------

RESISTORS

All Resistors	RD1/4PU□□□J
---------------	-------------

OTHERS

V701 FL INDICATOR TUBE	PEL1085
REMOTE SENSOR	SBX1785-51

PD - S705

Mark	No.	Description	Part No.
------	-----	-------------	----------

SWITCH ASSY

SEMICONDUCTORS

Q751, Q752	DTC124ES
D763	PCX1019
D762	PCX1023
D752, D753	1SS254

SWITCHES

S751-S757	PSG1006
-----------	---------

RESISTORS

All Resistors	RD1/4PU□□□J
---------------	-------------

SERVO TRANS ASSY

SEMICONDUCTORS

△ IC31	ICP-N10
IC60	M51957AL
△ IC20	NJM78L05A
△ Q21	2SA1262
Q22	2SA933S
D54	MTZJ18B
△ D11-D14, D21-D24, D52	S5688G

COILS

L13, L21, L24	FERRITE BEADS	PTH1013
L15	FERRITE BEADS	PTH1014
L22	FERRITE BEADS	PTH1015
L16, L18, L26	FERRITE BEADS	PTH1016

CAPACITORS

C62	CEAS010M50
C61	CEASR33M50
C18, C19	CEZA010M50
△ C12	CGCYX473K25
△ C11, C13-C16	CKCYF103Z50
C27	PCH1123
C25, C26, C31, C32	PCH1125
C52, C53	PCH1126

RESISTORS

R24	RD1/2PM010J
Other Resistors	RD1/4PU□□□J

OTHERS

△ J31	CONNECTOR ASSY	PF03EN-S25
	RAPPING TERMINAL	RKC-061

MECHANISM BOARD ASSY

SWITCH

S610	DSG1016
------	---------

OTHERS

CN610	MT CONNECTOR 4P	173979-4
-------	-----------------	----------

Mark	No.	Description	Part No.
------	-----	-------------	----------

4.3 FOR HPW AND SD TYPES

MOTHER BOARD ASSY

OTHERS

PC Board MOTHER BOARD	PNP1411
-----------------------	---------

MAIN BOARD ASSY

• Contrast of PWZ3235 and PWZ3236

PWZ3235 and PWZ3236 have the same construction except for the following.

Mark	Symbol & Description	Part No.		Remarks
		PWZ3235	PWZ3236	
△	D391 - D394 L391, L392 C393 R391 R392 JA391, JA392 Remote control jack	1SS254 LAU010J CCCCSL101J50 RD1/4PU244J RD1/4PU102J RKN1004	Not used Not used Not used Not used Not used Not used	

• PARTS LIST FOR PWZ3235

SEMICONDUCTORS

IC151	CXA1372Q
IC301	CXD2507AQ
△ IC201	LA6517
△ IC202	LA6520
△ IC421	NJM2930L05
IC405	NJM4558DX
IC341	PD0236AD
IC401	PD2029A(L)
IC351	PD4702A
Q391	2SC1740S
Q403, Q404, Q453, Q454	2SC3068
Q451, Q452	DTA124ES
Q322, Q323, Q405, Q455, Q456	DTC124ES
D351, D391-D397, D451-D454	1SS254
D352	MTZJ5. 1B
D218	MTZJ6. 8B

COILS

△ L391, L392	LAU010J
L395, L396	LAU010J
L301	LAU390J
L321	PTH1016
L351	RTF1068

CAPACITORS

C435-C438	CCCCH050C50
C403	CCCCH120J50
C404	CCCCH220J50
C429, C430	CCCCH390J50
C393	CCCCSL101J50
C406	CCCCSL271J50
C153, C341	CEAS101M10
C211, C212, C216, C217, C407	CEAS101M25
C431, C432	CEAS101M25
C301	CEAS101M50

Mark	No.	Description	Part No.
	C131, C303		CEAS221M25
	C302, C322, C351		CEAS471M6R3
	C160, C162, C451, C452		CEAS4R7M50
	C309		CEASR47M50
	C329, C354		CFTXA103J50
	C161, C321, C355, C413-C416		CFTXA104J50
	C441, C442		CFTXA152J50
	C151		CFTXA394J50
	C157, C164, C169, C308		CGCYX103K25
	C158, C159, C163		CGCYX104K25
	C156, C168		CGCYX333K25
	C307		CGCYX473K25
	C171		CKCYB102K50
	C306		CKCYB152K50
	C218		CKCYB272K50
	C170		CKCYB332K50
	C172		CKCYB472K50
	C155		CKCYB561K50
	C167, C205, C210, C215, C219		CKCYF103Z50
	C352, C353, C461		CKCYF103Z50
	C342		CQMA154J50
	C433, C434 (100 μ F/50V)		PCH1126
	C405 (470 μ F/50V)		PCH1129

RESISTORS

R496		RD1/2PM152J
VR151, VR152 (22k Ω)		RCP1046
Other Resistors		RD1/4PU□□□J

OTHERS

CN131	FPC CONNECTOR 12P	12FMZ-ABT
CN202	MT CONNECTOR 4P	173981-4
CN204	MT CONNECTOR 5P	173981-5
CN353	2P JUMPER CONNECTOR	52147-0210
CN11	11P JUMPER CONNECTOR	52147-1110
CN352	15P JUMPER CONNECTOR	52147-1510
CN351	17P JUMPER CONNECTOR	52147-1710
CN12	3P TOP POST	B3B-EH
JA401	2P PINJACK	PKB1009
JA393	MINI JACK	PKN1005
X401	CRYSTAL RESONATOR(16.9344MHz)	PSS1008
CN201	CONNECTOR 6P	RKP-533
JA301	OPTICAL OUTPUT JACK	TOTX178
	PCB BINDER	VEF1008
X351	CERAMIC RESONATOR(4.19MHz)	VSS1014
JA391, JA392	REMOTE CONTROL JACK	RKN1004

Mark	No.	Description	Part No.
		SUB BOARD ASSY	

OTHERS

PC Board SUB BOARD	PNP1412
SCREW	BBZ30P080FCC

DISPLAY ASSY**SEMICONDUCTORS**

D701, D704, D705	1SS254
D711	PCX1019

COILS

L701, L702	LFA010K
L703 (0.15mH)	RTF1068

SWITCHES

S701-S707	PSG1006
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CAPACITOR

C701	CEJA330M16
------	------------

RESISTORS

All Resistors	RD1/4PU□□□J
---------------	-------------

OTHERS

V701 FL INDICATOR TUBE	PEL1085
REMOTE SENSOR	SBX1785-51

SWITCH ASSY**SEMICONDUCTORS**

Q751, Q752	DTC124ES
D763	PCX1019
D762	PCX1023
D752, D753	1SS254

SWITCHES

S751-S757	PSG1006
-----------	---------

RESISTORS

All Resistors	RD1/4PU□□□J
---------------	-------------

PD - S705

Mark No. Description Part No.

SERVO TRANS ASSY

● Contrast of PWZ3278 and PWZ3277

PWZ3278 and PWZ3277 have the same construction except for the following.

Mark	Symbol & Description	Part No.		Remarks
		PWZ3278	PWZ3277	
△ NSP	J11 Lead wire unit	Not used	PDF1111	
△ NSP	J12 Lead wire unit	Not used	PDF1102	
△ NSP	J13 Lead wire unit	Not used	PDF1100	
△ NSP	J14 Lead wire unit	Not used	PDF1099	
△ NSP	J15 Lead wire unit	Not used	PDF1101	

● PARTS LIST FOR PWZ3278

SEMICONDUCTORS

△	IC31	ICP-N10
	IC60	M51957AL
△	IC20	NJM78L05A
△	Q21	2SA1262
	Q22	2SA933S
	D54	MTZJ18B
△	D11-D14, D21-D24, D52	S5688G

CAPACITORS

C18, C19, C62	CEAS010M50
C53	CEAS101M25
C52	CEAS101M35
C25, C26, C31, C32	CEAS332M16
C27	CEAS471M6R3
C61	CEASR33M50
C12	CGCYX473K25
C11, C13-C16	CKCYF103Z50

RESISTORS

R24	RD1/2PM010J
Other Resistors	RD1/4PU□□□J

OTHERS

△	J31 CONNECTOR ASSY	PF03EN-S25
	RAPPING TERMINAL	RKC-061

MECHANISM BOARD ASSY

SWITCH

S610	DSG1016
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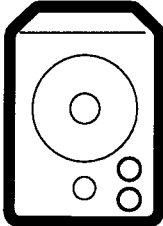
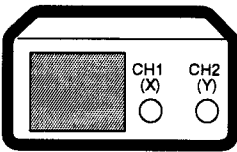
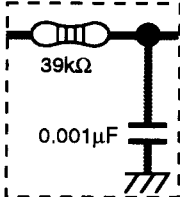
OTHERS

CN610	MT CONNECTOR 4P	173979-4
-------	-----------------	----------






5. ADJUSTMENTS (調整方法)

5.1 PREPARATIONS (準備)

■ Jigs and Measuring Instruments (使用測定器/治工具類)

 <p>CD TEST DISC (YEDS-7)</p>	 <p>⊖ Precise screwdriver</p>	 <p>⊖ screwdriver (small)</p>	 <p>⊕ screwdriver (medium)</p>
 <p>⊕ screwdriver (large)</p>	 <p>Low-frequency oscillator</p>	 <p>Dual-trace oscilloscope (10:1 probe)</p>	 <p>Low pass filter (39kΩ + 0.001μF)</p>

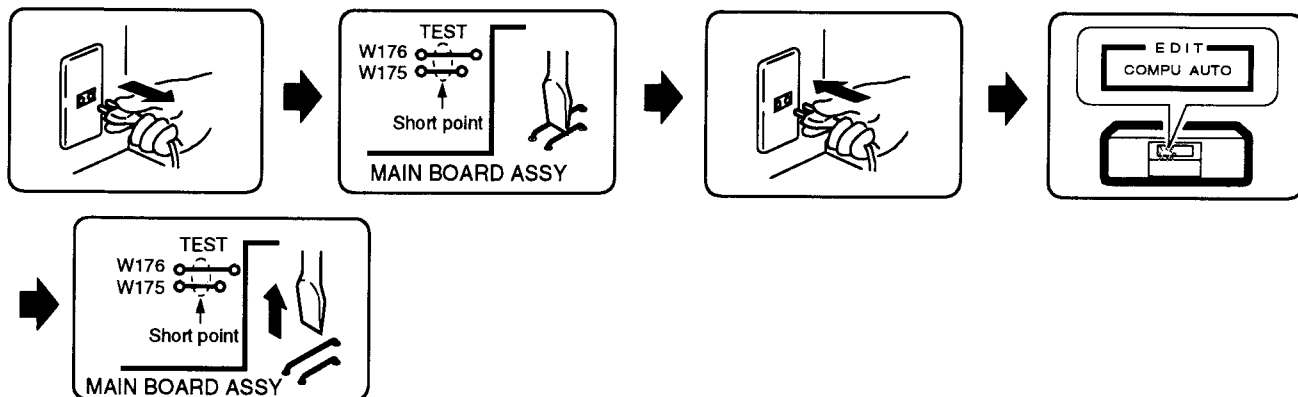
■ Necessary Adjustment Points (調整に必要な項目)

When (このような時)	Adjustment Points
Exchange PICKUP (ピックアップを交換した時)	 1, 2, 3, 4, 5, 6 → Page 27 to 29
Exchange MAIN BOARD ASSY (MAIN BOARD ASSYを交換した時)	 1, 2, 3, 4, 5, 6 → Page 27 to 29
Exchange SERVO MECH ASSY (サーボメカASSYを交換した時)	 1, 2, 3, 4, 5, 6 → Page 27 to 29
Exchange SPINDLE MOTOR (スピンドルモーターを交換した時)	  ADJ → Page 10

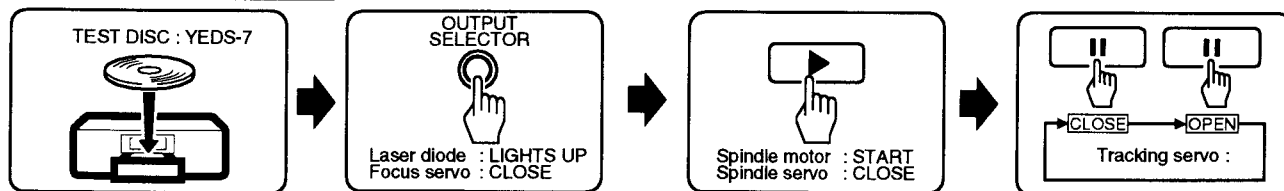
5.2 ADJUSTMENT (調整)

■ How to Start / Cancel Test Mode (テストモードの設定/解除)

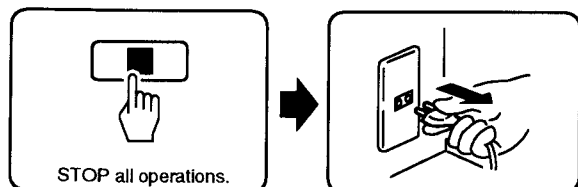
TEST MODE : ON



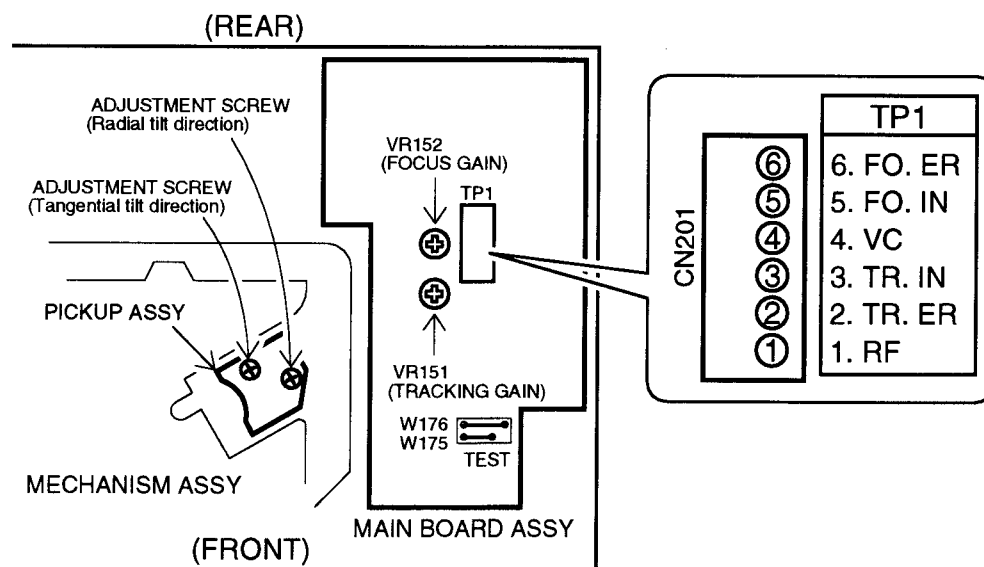
TEST MODE : PLAY



TEST MODE : STOP → CANCEL



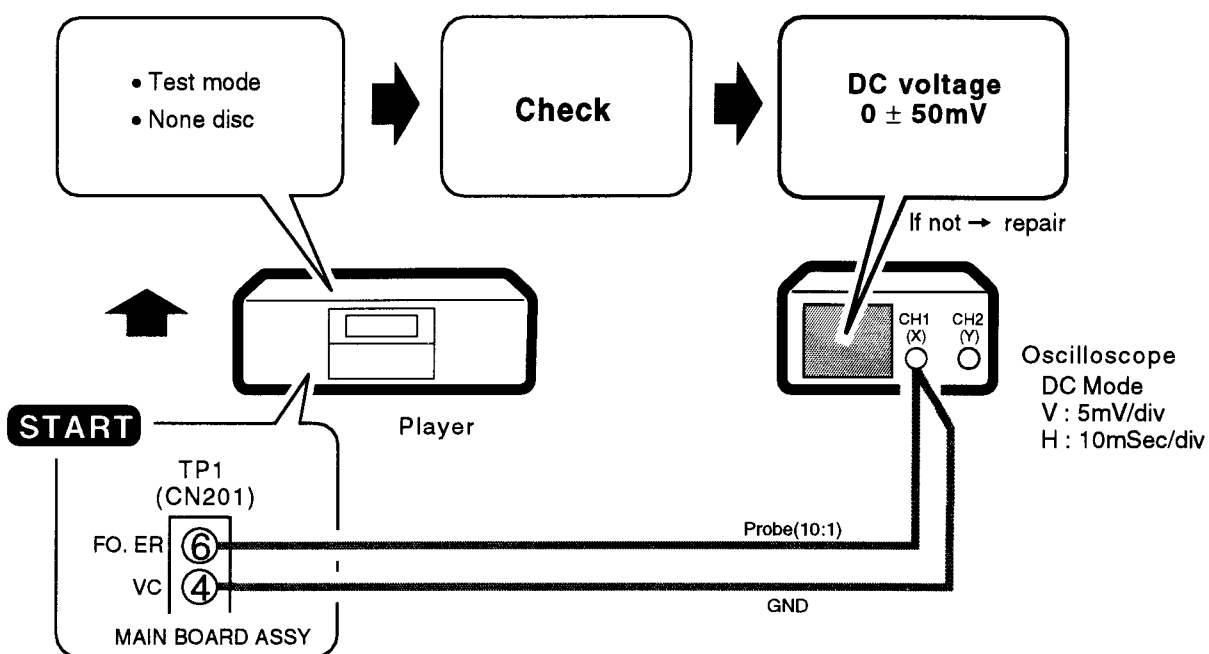
■ Adjustment Locations (テストポイントと調整用VRの位置)



■ Check and Adjustment (確認, 調整)

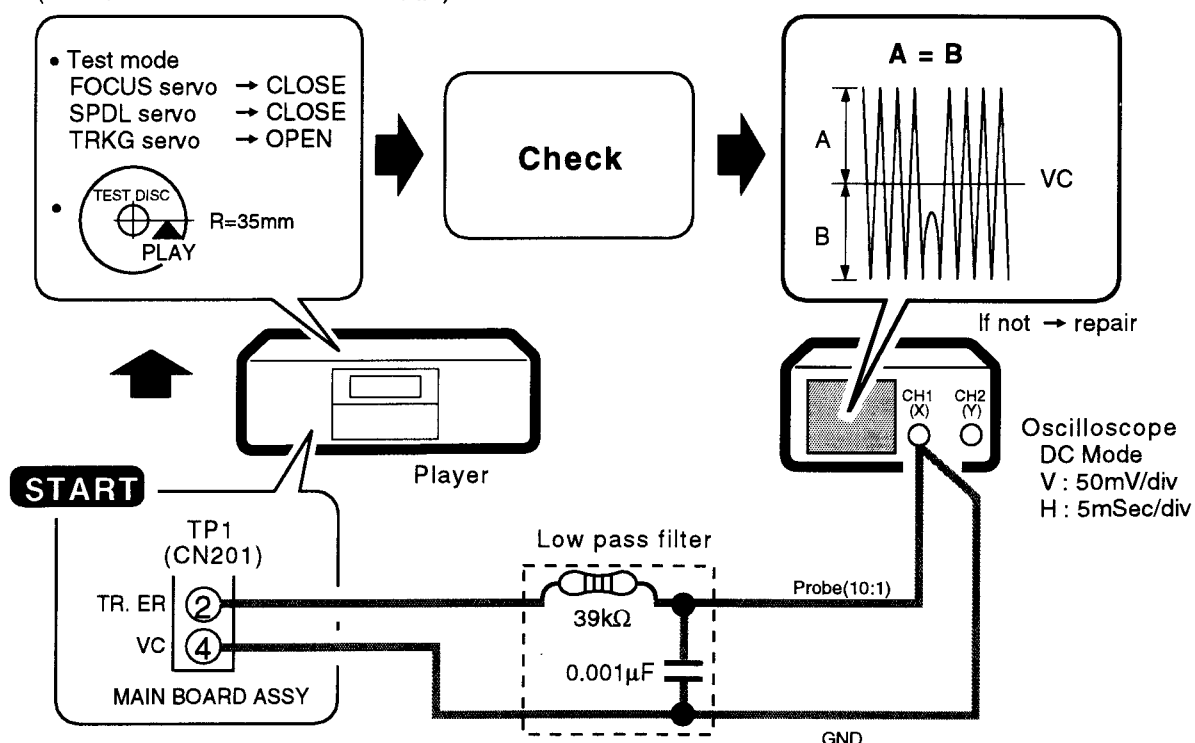
1. Focus Offset Check

(フォーカスオフセット確認)



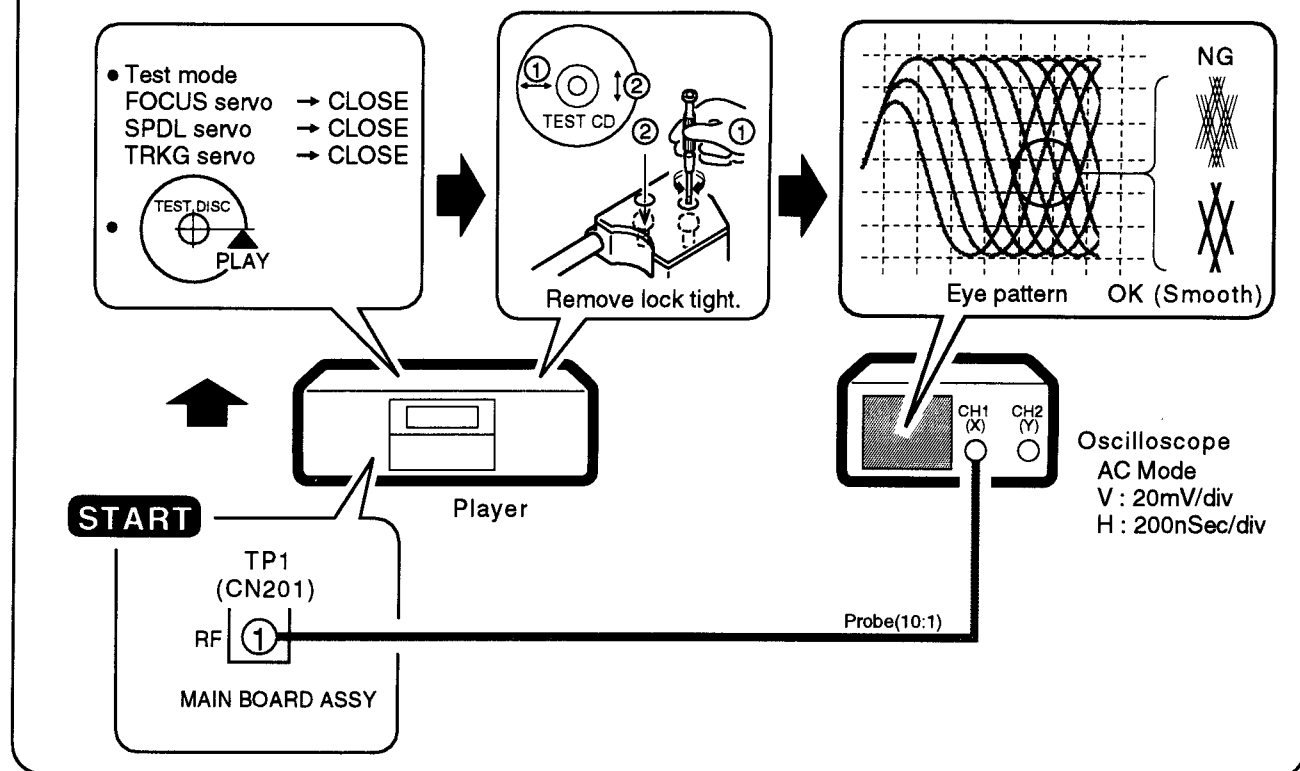
2. Tracking Error Balance Check

(トラッキングエラーバランス確認)



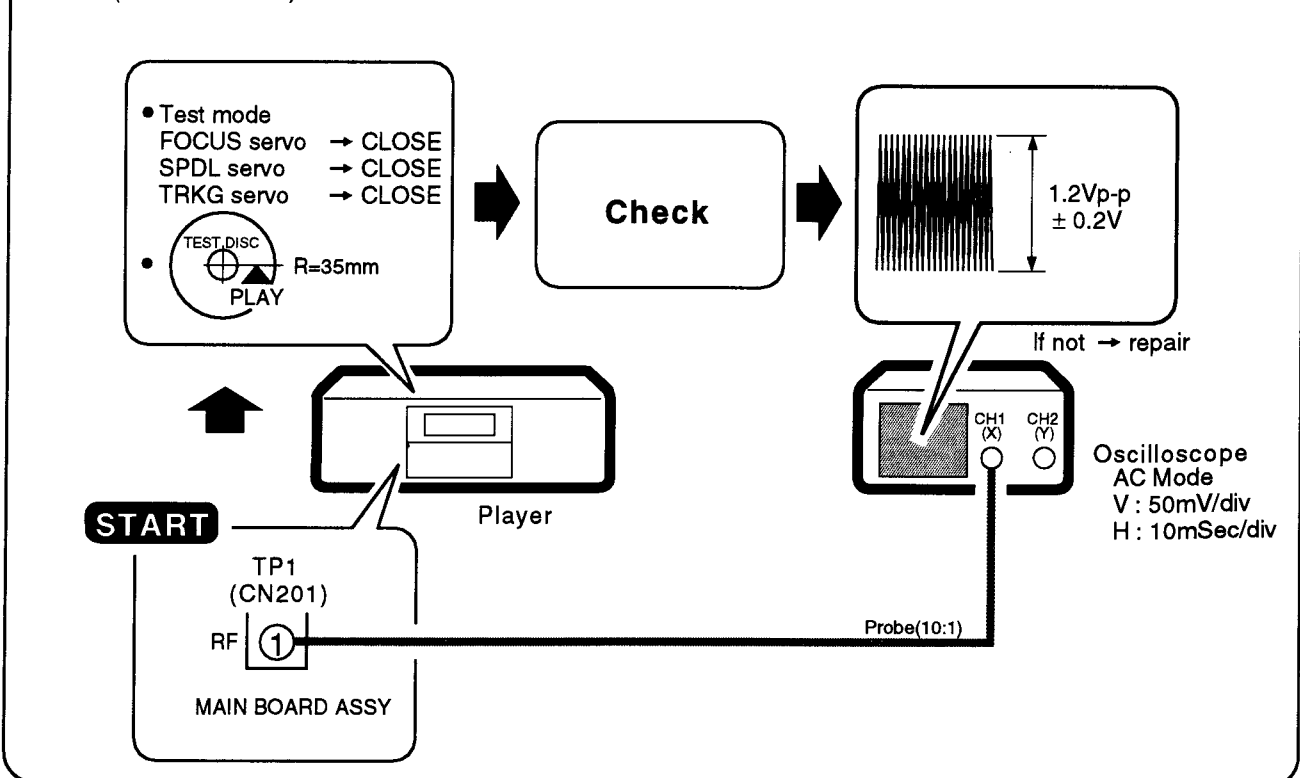
3. Pickup ① Radial / ② Tangential Direction Tilt Adjustment

(ピックアップ① ラジアル方向, ② タンジェンシャル方向の傾き調整)



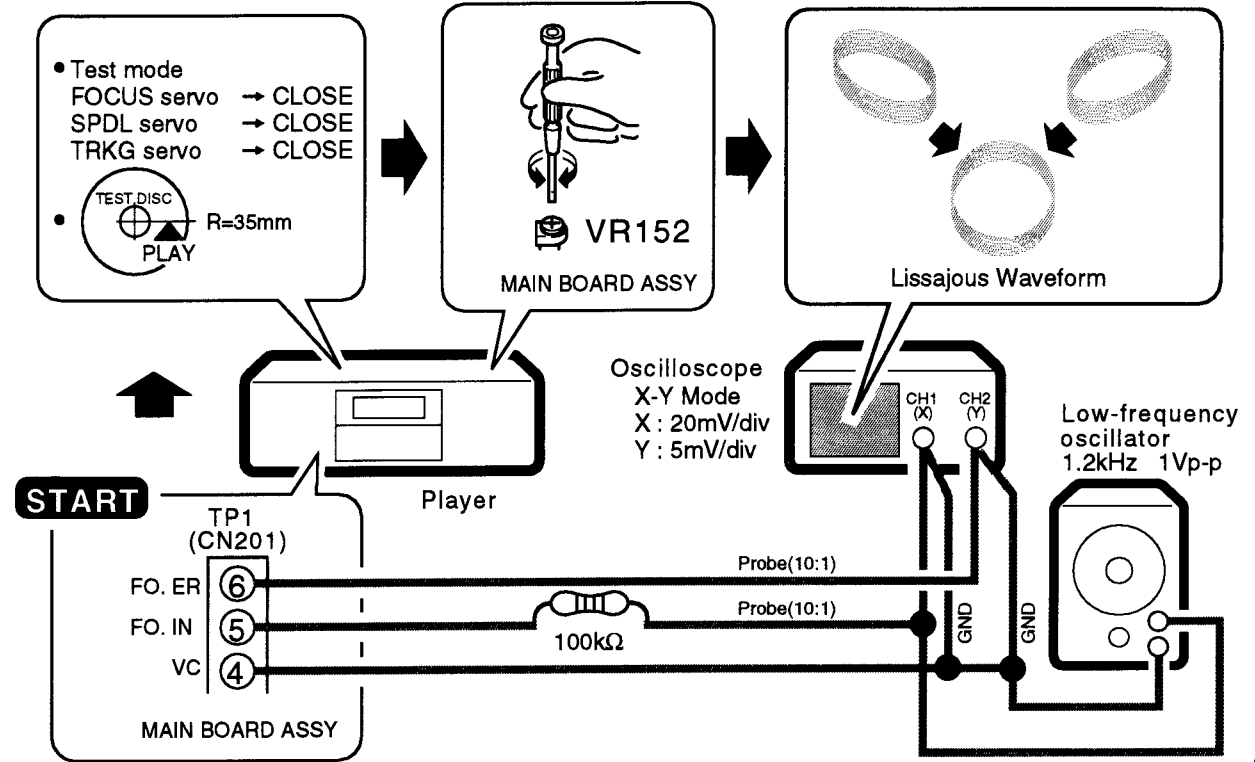
4. RF Level Check

(RFレベル確認)



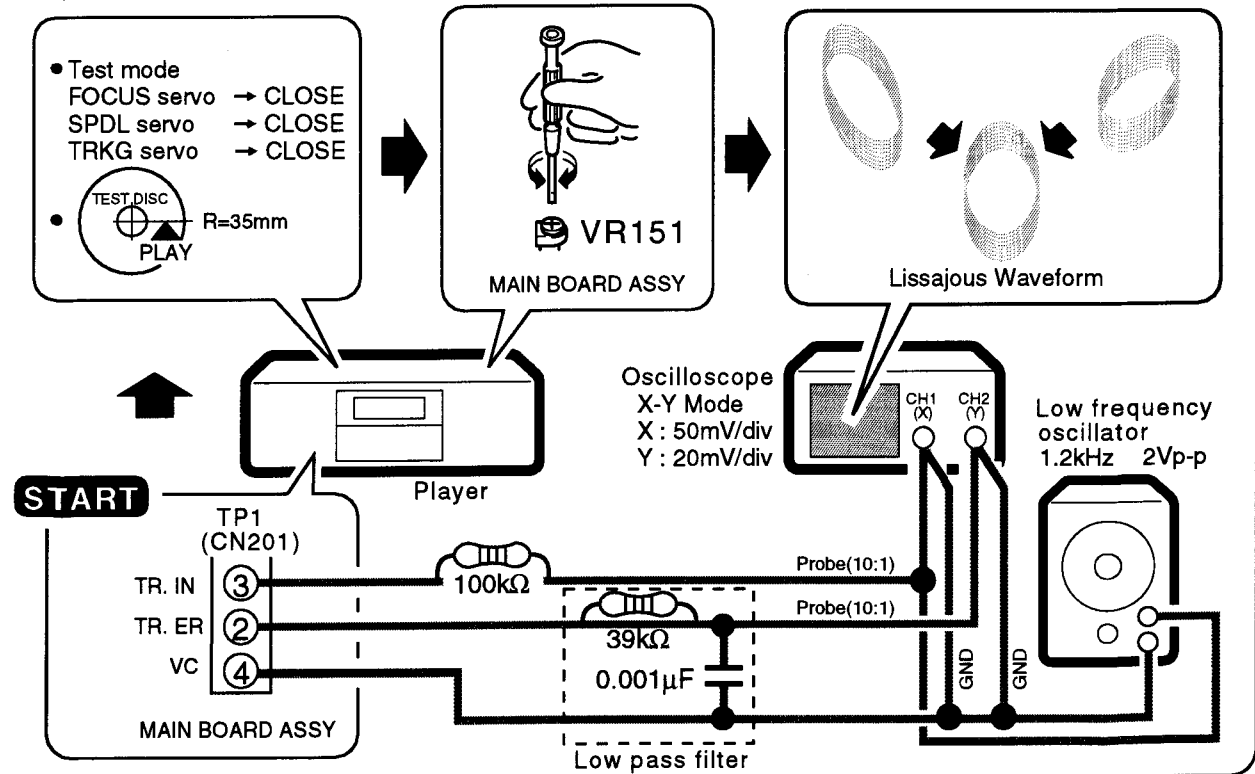
5. Focus Servo Loop Gain Adjustment

(フォーカスサーボループゲイン調整)



6. Tracking Servo Loop Gain Adjustment

(トラッキングサーボループゲイン調整)



•The information in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

- HI-BIT IC

VDD 10

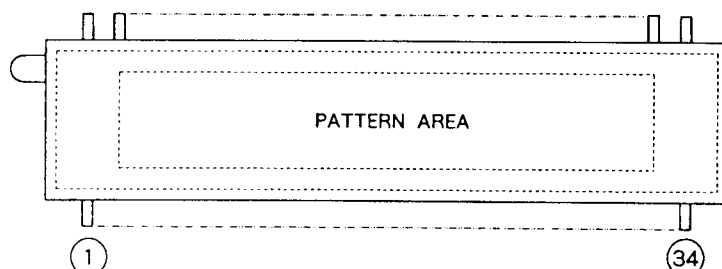


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7. FL INFORMATION

■ PEL1085 (V701 : DISPLAY ASSY)

• FL INDICATOR TUBE



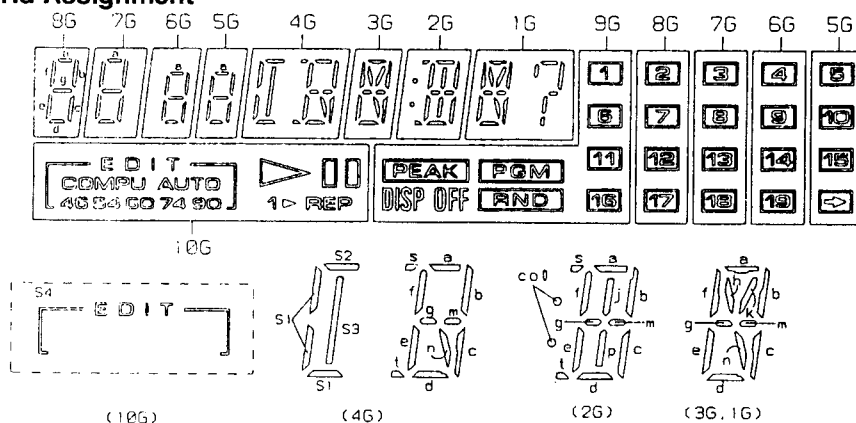
• Pin Connection

PIN No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
CONNECTION	F	F	N	P	P	P	P	P	P	P	P	P	P	P	1	0	9	8	7	6	5	4	3	2	1	N	N	N	N	N	N	N	N	F
	1	2	P	1	2	3	4	5	6	7	8	9	0	1	2	G	G	G	G	G	G	G	G	G	G	X	X	X	X	X	X	P	X	2

NOTE 1) F1, F2..... Filament
 2) NP..... No pin
 3) NX..... No extend pin

4) DL..... Datum Line
 5) 1G - 10G..... Grid

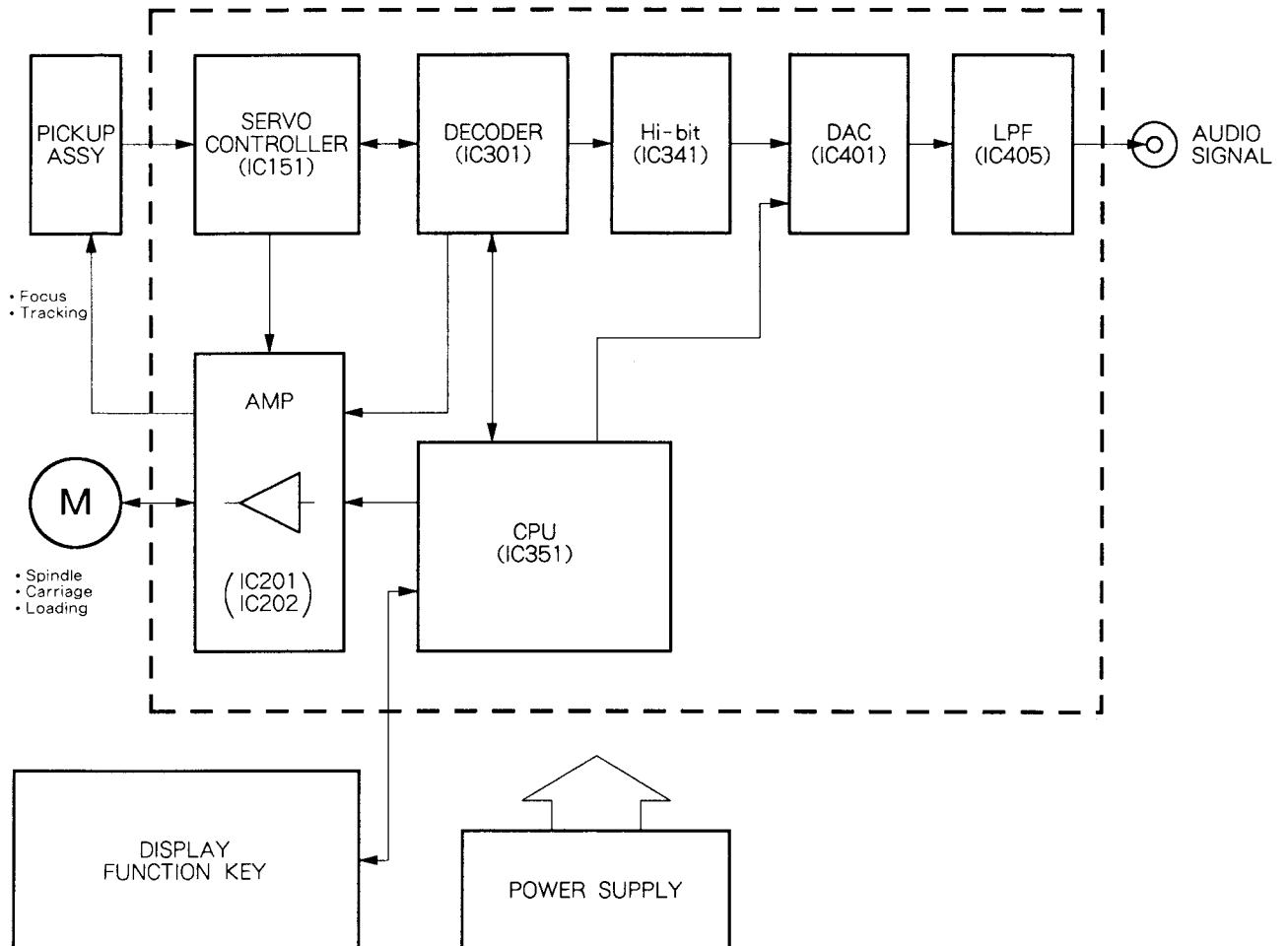
• Grid Assignment



• Anode Connection

	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	48	RND	e	e	e	e	e	e	e	e
P2	54	PGM	f	f	f	f	f	f	f	f
P3	60	PEAK	g	g	g	g	g, m	g, m	g, m	g
P4	1▷	DISP OFF	-	-	-	-	s, t	-	s, t	m
P5	74	-	a	a	a	a	a	a	a	a
P6	80	-	b	b	b	b	b	b	b	b
P7	AUTO	-	c	c	c	c	c	c	c	c
P8	COMPU	-	d	d	d	d	d	d	d	d
P9	S4	1	2	3	4	5	S2	h	col	h
P10	▷	6	7	8	9	10	S3	k	j, p	k
P11	00	11	12	13	14	15	n	n	-	n
P12	REP	16	17	18	19	20	S1	-	-	?

8. BLOCK DIAGRAM



9. DISASSEMBLY/ASSEMBLY

9.1 REMOVE THE BONNET

- Disassembly : ①→②→③→④
- Assembly : ④→①→②→③

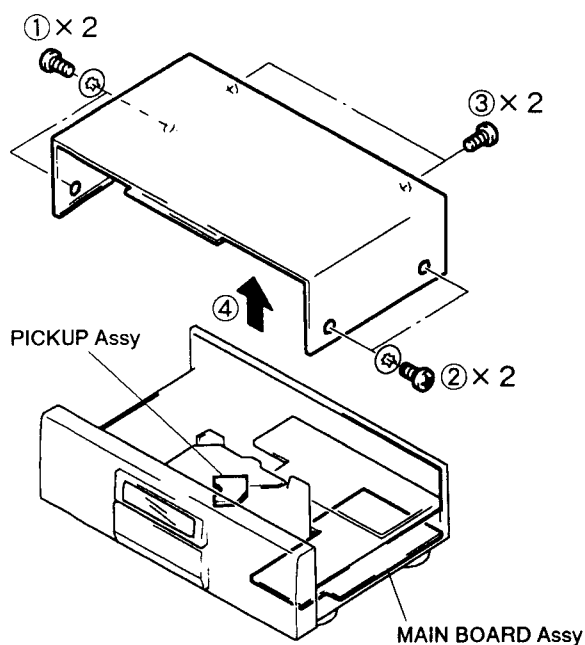


Fig. 1

9.2 REMOVE THE TRAY PANEL

Hold the Tray Panel with your hands as shown in Fig. 2, and grasp the Tray with your thumbs and then lift the Tray Panel up while pulling it toward you with the other fingers. (Fig. 3)

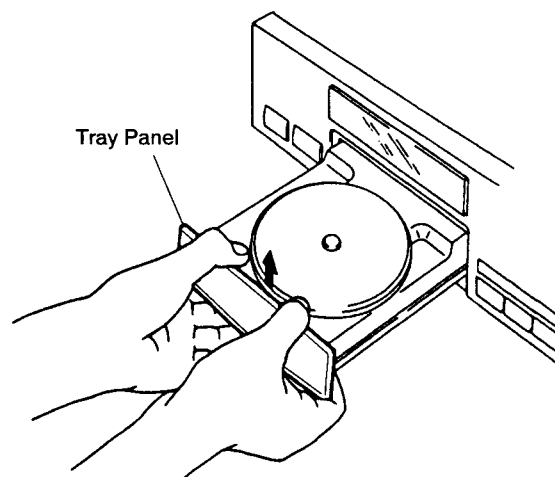


Fig. 2

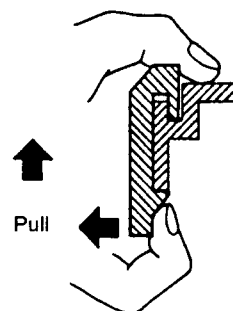


Fig. 3

9.3 INSTALL THE TRAY PANEL

Align the Tray Panel with the grooves located at both edges of the Tray. And then press it down till it stops. (Fig. 4)

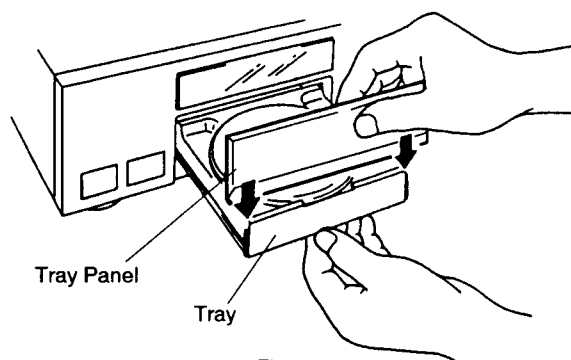
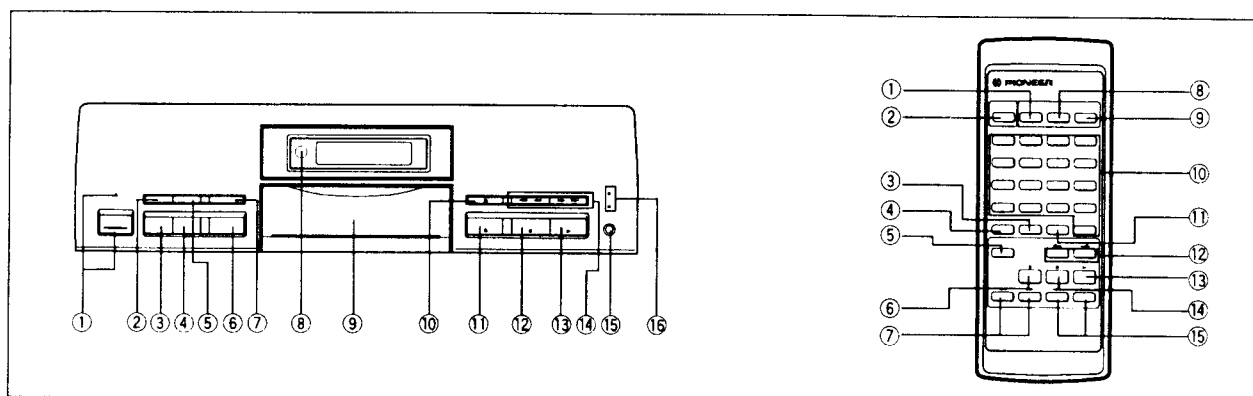


Fig. 4

10. PANEL FACILITIES



FRONT PANEL

- ① POWER STANDBY/ON switch and STANDBY indicator**
- ② DISPLAY OFF button**
- ③ HI-LITE SCAN button**
- ④ RANDOM button**
- ⑤ TIME button**
- ⑥ REPEAT button**
- ⑦ COMPU/AUTO EDIT button (● COMPU/●● AUTO)**
- ⑧ Remote sensor**
Receives the signal from the remote control unit.
- ⑨ Disc tray**
- ⑩ Stop button (■)**
- ⑪ OPEN/CLOSE button (▲)**
- ⑫ Pause button (II)**
- ⑬ Play button (▶)**
- ⑭ Track/Manual search buttons (◀◀ ◀▶ ▶▶ ▶▶)**
- ⑮ OUTPUT SELECTOR button**
- ⑯ DIGITAL/ANALOG output indicators**

REMOTE CONTROL UNIT

Remote control buttons with the same names or marks as buttons on the front panel of the player control the same operations as the corresponding front panel buttons.

- ① OPEN/CLOSE button
- ② POWER button
- ③ CHECK button
- ④ PROGRAM button
- ⑤ COMPU/AUTO EDIT button
- ⑥ Stop button (■)
- ⑦ Manual search buttons (◀◀/▶▶)
- ⑧ REPEAT button
- ⑨ RANDOM PLAY button
- ⑩ Track number/Digit buttons (1 - 16, >16)
- ⑪ CLEAR button
- ⑫ Index buttons (←/→)
- ⑬ Play button (▶)
- ⑭ Pause button (⏸)
- ⑮ Track search buttons (◀◀/▶▶)

11. SPECIFICATIONS (For HY Type)

1. General

Type	Compact disc digital audio system
Power requirements	AC 220 - 230 V, 50/60 Hz
Power consumption	14 W
Operating temperature	+5°C - +35°C
Weight	4.2 kg
External dimensions	420 (W) X 283 (D) X 125 (H) mm

2. Audio section

Frequency response	2 Hz - 20 kHz
S/N ratio	110 dB or more (EIAJ)
Dynamic range	96 dB or more (EIAJ)
Harmonic distortion	0.0026% or less (EIAJ)
Output voltage	2.0 V
Wow and flutter	Limit of measurement ($\pm 0.001\%$ W. PEAK) or less (EIAJ)
Channels	2-channel (stereo)

3. Output terminal

Audio line output jacks
Optical digital output jacks
CD-DECK SYNCHRO jack

4. Accessories

- Remote control unit 1
- AAA/R03 dry cell batteries 2
- Output cable 1
- Operating instructions 1

NOTE:

Specifications and design subject to possible modification without notice, due to improvements.